SAMSUNG

TFT-LCD MONITOR

Chassis MZ19FS

Model 910MP

SERVICE Manual

TFT-LCD MONITOR

CONTENTS

1. Precautions
2. Product Specifications
3. Disassembly & Reassembly
4. Alignment & Adjustments
5. Troubleshooting
6. Exploded View & Parts List
7. Electrical Parts List
8. Block Diagram
9. Wiring Diagram
10. PCB Layout
11. Schematic Diagrams

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1 Precautions

Follow these safety, servicing and ESD precautions to prevent damage and to protect against potential hazards such as electrical shock.

1-1 Safety Precautions

1-1-1 Warnings

1. For continued safety, do not attempt to modify the circuit board.
2. Disconnect the AC power and DC Power Jack before servicing.

1-1-2 Servicing the LCD Monitor

1. PBA and panel components are very sensitive to static electricity. Always wear anti-static gloves when handling PBA or panel. Use an anti-static wrist strap and/or work bench. Keep parts in protective bags until ready for use.
2. Do not use or apply excessive force when handling panel. Damage to liquid crystal display may result from improper handling.

1-1-3 Fire and Shock Hazard

Before returning the monitor to the user, perform the following safety checks:

1. Inspect each lead dress to make certain that the leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the monitor.
2. Inspect all protective devices such as nonmetallic control knobs, insulating materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacitor networks, mechanical insulators, etc.
3. Leakage Current Hot Check (Figure 1-1):
   WARNING: Do not use an isolation transformer during this test.
   Use a leakage current tester or a metering system that complies with American National Standards Institute (*ANSI C101.1, Leakage Current for Appliances*), and Underwriters Laboratories (*UL Publication UL1410, 59.7*).

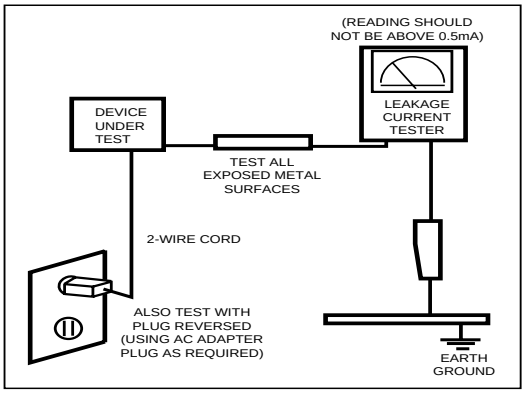


Figure 1-1. Leakage Current Test Circuit

4. With the unit completely reassembled, plug the AC line cord directly into a 120/230V AC outlet. With the unit's AC switch first in the ON position and then OFF, measure the current between a known earth ground (metal water pipe, conduit, etc.) and all exposed metal parts, including: metal cabinets, screwheads and control shafts. The current measured should not exceed 0.5 milliamp. Reverse the power-plug prongs in the AC outlet and repeat the test.

1-1-4 Product Safety Notices

Some electrical and mechanical parts have special safety-related characteristics which are often not evident from visual inspection. The protection they give may not be obtained by replacing them with components rated for higher voltage, wattage, etc. Parts that have special safety characteristics are identified by ⚠ on schematics and parts lists. A substitute replacement that does not have the same safety characteristics as the recommended replacement part might create shock, fire and/or other hazards. Product safety is under review continuously and new instructions are issued whenever appropriate.

1-2 Servicing Precautions

WARNING: **An electrolytic capacitor installed with the wrong polarity might explode.**

Caution: **Before servicing units covered by this service manual, read and follow the Safety Precautions section of this manual.**

Note: **If unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions, always follow the safety precautions.**

1-2-1 General Servicing Precautions

1. Always unplug the unit's AC power cord from the AC power source and disconnect the DC Power Jack before attempting to:
   (a) remove or reinstall any component or assembly, (b) disconnect PCB plugs or connectors, (c) connect a test component in parallel with an electrolytic capacitor.
2. Some components are raised above the printed circuit board for safety. An insulation tube or tape is sometimes used. The internal wiring is sometimes clamped to prevent contact with thermally hot components. Reinstall all such elements to their original position.
3. After servicing, always check that the screws, components and wiring have been correctly reinstalled. Make sure that the area around the serviced part has not been damaged.
4. Check the insulation between the blades of the AC plug and accessible conductive parts (examples: metal panels, input terminals and earphone jacks).
5. Insulation Checking Procedure: Disconnect the power cord from the AC source and turn the power switch ON. Connect an insulation resistance meter (500 V) to the blades of the AC plug.

   The insulation resistance between each blade of the AC plug and accessible conductive parts (see above) should be greater than 1 megohm.
6. Always connect a test instrument's ground lead to the instrument chassis ground before connecting the positive lead; always remove the instrument's ground lead last.

1-3 Electrostatically Sensitive Devices (ESD) Precautions

Some semiconductor (solid state) devices can be easily damaged by static electricity. Such components are commonly called Electrostatically Sensitive Devices (ESD). Examples of typical ESD are integrated circuits and some field-effect transistors. The following techniques will reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor components or assemblies, drain the electrostatic charge from your body by touching a known earth ground. Alternatively, wear a discharging wrist-strap device. To avoid a shock hazard, be sure to remove the wrist strap before applying power to the monitor.
2. After removing an ESD-equipped assembly, place it on a conductive surface such as aluminum foil to prevent accumulation of an electrostatic charge.
3. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ESDs.
4. Use only a grounded-tip soldering iron to solder or desolder ESDs.
5. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ESDs.
6. Do not remove a replacement ESD from its protective package until you are ready to install it. Most replacement ESDs are packaged with leads that are electrically shorted together by conductive foam, aluminum foil or other conductive materials.
7. Immediately before removing the protective material from the leads of a replacement ESD, touch the protective material to the chassis or circuit assembly into which the device will be installed.

   Caution: Be sure no power is applied to the chassis or circuit and observe all other safety precautions.
8. Minimize body motions when handling unpackaged replacement ESDs. Motions such as brushing clothes together, or lifting your foot from a carpeted floor can generate enough static electricity to damage an ESD.

2 Product Specifications

Designed to be suitable for both NTSC and PAL types, this product can be used world-wide.

2-1 Specifications

Item	Description	
LCD Panel	TFT-LCD panel, RGB vertical stripe, normally white, 19-Inch viewable, 0.2895 mm pixel pitch	
Scanning Frequency	Horizontal : 31 kHz ~ 81 kHz (Automatic) Vertical : 56 Hz ~ 75 Hz (Automatic)	
Display Colors	16.7 Million colors	
Maximum Resolution	Horizontal : 1280 Pixels Vertical : 1024 Pixels	
Input Video Signal	Analog 0.7 Vp-p ± 5% positive at 75 Ω, internally terminated	
Input Sync Signal	Type : Separate H/V Sync-on-Green, automatic synchronization without external switch of sync type Level : TTL level	
Maximum Pixel Clock rate	135 MHz	
Active Display Horizontal/Vertical	376.32 mm / 301.056 mm	
AC power voltage & Frequency	AC 100 to 240 VAC(+/- 10%)	
Power Consumption	49 W (Max), (2W Power Off)	
Dimensions (W x D x H) Set (W x D x H) Package (W x D x H)	 16.93 x 8.97 x 17.10 Inches (430 x 227.8 x 434.4 mm) 16.93 x 2.48 x 16.54 Inches (430 x 63 x 420 mm) Without stand 20.74 x 22.91 x 6.38 Inches (527 x 576 x 162 mm) Outside dimension	
Weight	5.8 Kg (12.79 lbs) After installation Stand / 7.9 Kg (17.42 lbs)	
Environmental Considerations	Operating Temperature : 50 °F ~ 104 °F (10 °C ~ 40 °C) Operating Humidity : 10 % ~ 80 % Storage Temperature : -13 °F ~ 113 °F (-25 °C ~ 45 °C) Storage Humidity : 5 % ~ 95 %	
TV System	Tuning	Frequency Synthesize
	Color	NTSC-M, PAL-M/N, PAL/SECAM-
	Sound	BTSC, A2-Korea, EIAJ B/G, D/K, L/L'
Autenna Input	75Ω, Coaxial Cable	
Sound Characteristic	– MAX Internal speaker Out : Right => 3 W Left => 3 W	
	– BASS Control Range : -12 dB ~ + 12 dB – TREBLE Control Range : -12 dB ~ + 12 dB – Headphone Out: RF => 5 mW max (400 m Vrms) A/V => 10 mW max (580 Vrms), Max Input sound : -9 dBm – Output Frequency (TBD) : RF => 100 Hz ~ 15 kHz A/V => 100 Hz ~ 15 kHz	

2-2 Pin Assignments

2-2-1 15 Pin signal cable connector

Sync Type / Pin No.	15 Pin signal cable connector	
	Separate H/V	Composite H/V
1	Red	Red
2	Green	Green
3	Blue	Blue
4	GND	GND
5	GND (DDC Return)	GND (DDC Return)
6	GND-Red	GND-Red
7	GND-Green	GND-Green
8	GND-Blue	GND-Blue
9	No Connection	No Connection
10	GND-Sync/Self Test	GND-Sync/Self Test
11	GND	GND
12	DDC Data	DDC Data
13	Horizontal Sync	H/V Sync
14	Vertical Sync	Not Used
15	DDC Clock	DDC Clock

2-3 Timing Chart

This section of the service manual describes the timing that the computer industry recognizes as standard for computer-generated video signals.

Table 2-1 Timing Chart

Originator Mode Name Resolution (HxV)	VESA 1280/60Hz 1280x1024			
HORIZONTAL Frequency Total time Active time Blank time Border (L / R) Data time Front porch Sync. width Back porch Sync. polarity	 63.981kHz 11.852μs 9.259μs 3.778μs 0.000μs 9.259μs 0.444μs 1.037μs 2.296μs Positive	blank	blank	blank
VERTICAL Frequency Total time Active time Blank time Border (T / B) Data time Front porch Sync. width Back porch Sync. polarity	 60.020Hz 16.005ms 15.630ms 0.375ms 0.000ms 15.630ms 0.016ms 0.047ms 0.594ms Positive	blank	blank	blank
Dot Clock	108.00MHz			
Sync. Type Scan Type*	Separate N/I			

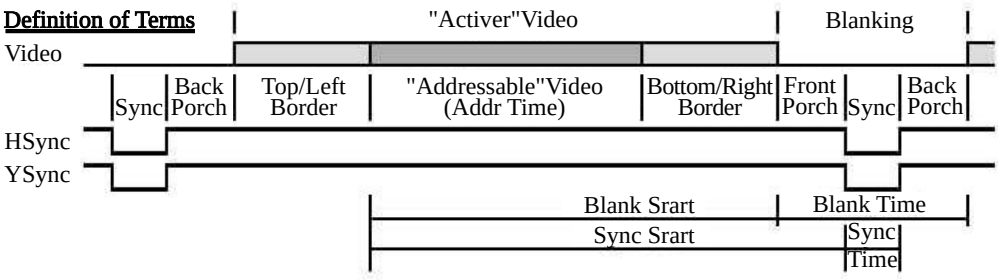


Table 2-2 Timing Chart

Originator	IBM	IBM	IBM	MAC	VESA
Mode Name	VGA1	VGA2	VGA3	640/67Hz	640/72Hz
Resolution (HxV)	640x350	720x400	640x480	640x480	640x480
HORIZONTAL					
Frequency	31.469kHz	31.469kHz	31.469kHz	35.000kHz	37.861kHz
Total time	31.778μs	31.777μs	31.778μs	28.571μs	26.413μs
Active time	26.058μs	26.058μs	26.058μs	21.164μs	20.825μs
Blank time	5.720μs	5.720μs	5.720μs	7.407μs	5.588μs
Border (L / R)	0.318μs	0.318μs	0.318μs	0.000μs	0.254μs
Data time	25.422μs	25.422μs	25.422μs	21.164μs	20.317μs
Front porch	0.318μs	0.318μs	0.318μs	2.116μs	0.508μs
Sync. width	3.813μs	3.813μs	3.813μs	2.116μs	1.270μs
Back porch	1.589μs	1.589μs	1.589μs	3.175μs	3.810μs
Sync. polarity	Positive	Negative	Negative	Negative	Negative
VERTICAL					
Frequency	70.086Hz	70.087Hz	59.940Hz	66.667Hz	72.809Hz
Total time	14.268ms	14.268ms	16.683ms	15.000ms	13.735ms
Active time	11.504ms	13.155ms	15.761ms	13.714ms	13.100ms
Blank time	2.764ms	1.113ms	0.922ms	1.286ms	0.635ms
Border (T / B)	0.191ms	0.222ms	0.254ms	0.000ms	0.211ms
Data time	11.122ms	12.711ms	15.253ms	13.714ms	12.678ms
Front porch	0.985ms	0.191ms	0.064ms	0.086ms	0.026ms
Sync. width	0.064ms	0.064ms	0.064ms	0.086ms	0.079ms
Back porch	1.716ms	0.858ms	0.794ms	1.114ms	0.528ms
Sync. polarity	Negative	Positive	Negative	Negative	Negative
Dot Clock	25.175MHz	28.322MHz	25.175MHz	30.240MHz	31.500MHz
Sync. Type	Separate	Separate	Separate	Separate Composite	Separate
Scan Type	N/I	N/I	N/I	N/I	N/I

Table 2-3 Timing Chart

Originator Mode Name Resolution (HxV)	VESA 640/75Hz 640x480	VESA 800/56Hz 800x600	VESA 800/60Hz 800x600	VESA 800/72Hz 800x600	VESA 800/75Hz 800x600
HORIZONTAL Frequency Total time Active time Blank time Border (L / R) Data time Front porch Sync. width Back porch Sync. polarity	 37.500kHz 26.667μs 20.317μs 6.350μs 0.000μs 20.317μs 0.508μs 2.032μs 3.810μs Negative	 35.156kHz 28.444μs 22.222μs 6.222μs 0.000μs 22.222μs 0.667μs 2.000μs 3.556μs Positive or Negative	 37.879kHz 26.400μs 20.000μs 6.400μs 0.000μs 20.000μs 1.000μs 3.200μs 2.200μs Positive	 48.077kHz 20.800μs 16.000μs 4.800μs 0.000μs 16.000μs 1.120μs 2.400μs 1.280μs Positive	 46.875kHz 21.333μs 16.162μs 5.171μs 0.000μs 16.162μs 0.323μs 1.616μs 3.232μs Positive
VERTICAL Frequency Total time Active time Blank time Border (T / B) Data time Front porch Sync. width Back porch Sync. polarity	 75.000Hz 13.333ms 12.800ms 0.533ms 0.000ms 12.800ms 0.027ms 0.080ms 0.427ms Negative	 56.250Hz 17.778ms 17.067ms 0.711ms 0.000ms 17.067ms 0.028ms 0.057ms 0.626ms Positive or Negative	 60.317Hz 16.579ms 15.840ms 0.739ms 0.000ms 15.840ms 0.026ms 0.106ms 0.607ms Positive	 72.188Hz 13.853ms 12.480ms 1.373ms 0.000ms 12.480ms 0.770ms 0.125ms 0.478ms Positive	 75.000Hz 13.333ms 12.800ms 0.533ms 0.000ms 12.800ms 0.021ms 0.064ms 0.448ms Positive
Dot Clock	31.500MHz	36.000MHz	40.000MHz	50.000MHz	49.500MHz
Sync. Type Scan Type	Separate N/I	Separate N/I	Separate N/I	Separate N/I	Separate N/I

Table 2-4 Timing Chart

Originator Mode Name Resolution (HxV)	MAC 832/75Hz 832x624	VESA 1024/60Hz 1024x768	VESA 1024/70Hz 1024x768	VESA 1024/75Hz 1024x768	VESA 1152/75Hz 1152x864
HORIZONTAL					
Frequency	49.726kHz	48.363kHz	56.476kHz	60.023kHz	67.500kHz
Total time	20.110μs	20.677μs	17.707μs	16.660μs	14.815μs
Active time	14.524μs	15.754μs	13.653μs	13.003μs	10.667μs
Blank time	5.586μs	4.923μs	4.054μs	3.657μs	4.148μs
Border (L / R)	0.000μs	0.000μs	0.000μs	0.000μs	0.000μs
Data time	14.524μs	15.754μs	13.653μs	13.003μs	10.667μs
Front porch	0.559μs	0.369μs	0.320μs	0.203μs	0.593μs
Sync. width	1.117μs	2.092μs	1.813μs	1.219μs	1.185μs
Back porch	3.910μs	2.462μs	1.920μs	2.235μs	2.370μs
Sync. polarity	Negative	Negative	Negative	Positive	Positive
VERTICAL					
Frequency	74.551Hz	60.004Hz	70.069Hz	75.029Hz	75.000Hz
Total time	13.414ms	16.666ms	14.272ms	13.328ms	13.333ms
Active time	12.549ms	15.880ms	13.599ms	12.795ms	12.800ms
Blank time	0.865ms	0.786ms	0.673ms	0.533ms	0.533ms
Border (T / B)	0.000ms	0.000ms	0.000ms	0.000ms	0.000ms
Data time	12.549ms	15.880ms	13.599ms	12.795ms	12.800ms
Front porch	0.020ms	0.062ms	0.053ms	0.017ms	0.015ms
Sync. width	0.060ms	0.124ms	0.106ms	0.050ms	0.044ms
Back porch	0.784ms	0.600ms	0.513ms	0.466ms	0.474ms
Sync. polarity	Negative	Negative	Negative	Positive	Positive
Dot Clock	57.284MHz	65.000MHz	75.000MHz	78.750MHz	108.000MHz
Sync. Type	Separate Composite	Separate	Separate	Separate	Separate
Scan Type	N/I	N/I	N/I	N/I	N/I

Table 2-5 Timing Chart

Originator Mode Name Resolution (HxV)	MAC 1152/75 1152x870	VESA 1280/75Hz 1280x1024			
HORIZONTAL Frequency Total time Active time Blank time Border (L / R) Data time Front porch Sync. width Back porch Sync. polarity	 68.681kHz 14.560μs 11.520μs 3.040μs 0.000μs 11.520μs 0.320μs 1.280μs 1.440μs Negative	 79.976kHz 12.504μs 9.481μs 3.023μs 0.000μs 9.481μs 0.119μs 1.067μs 1.837μs Positive	blank	blank	blank
VERTICAL Frequency Total time Active time Blank time Border (T / B) Data time Front porch Sync. width Back porch Sync. polarity	 75.062Hz 13.323ms 12.667ms 0.656ms 0.000ms 12.667ms 0.044ms 0.044ms 0.568ms Negative	 75.025Hz 13.329ms 12.804ms 0.525ms 0.000ms 12.804ms 0.013ms 0.038ms 0.475ms Positive	blank	blank	blank
Dot Clock	100.000MHz	135.00MHz			
Sync. Type Scan Type	Separate Composite N/I	Separate N/I			

Memo

3 Disassembly and Reassembly

This section of the service manual describes the disassembly and reassembly procedures for the MZ19FS LCD Monitor.

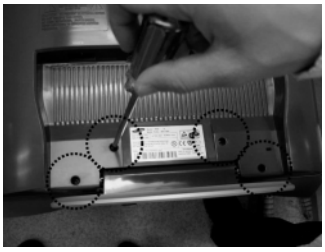
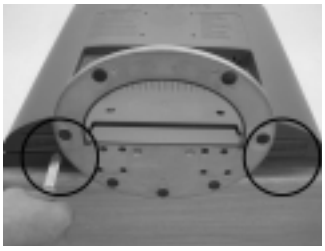
⚠ **WARNING: This monitor contains electrostatically sensitive devices. Use caution when handling these components.**

3-1 Disassembly

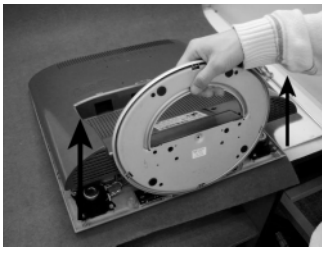
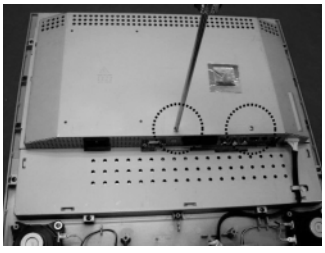
⚠ **Cautions: 1. Disconnect the monitor from the power source before disassembly.**

2. When IP-BOARD has a defect, the whole PCB ASS'Y, not a single part, should be replaced.

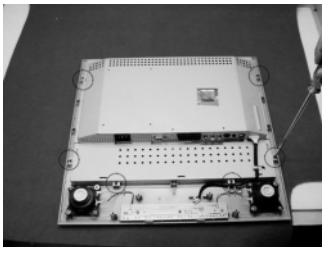
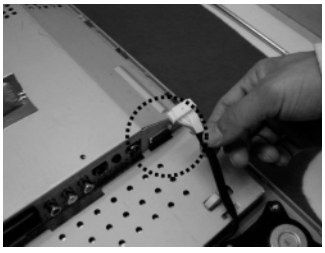
3. R/Cover opening jig : BH81-00001A

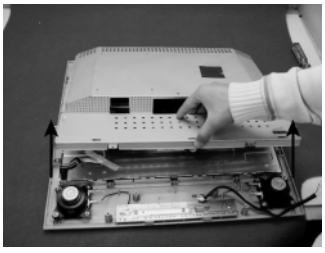
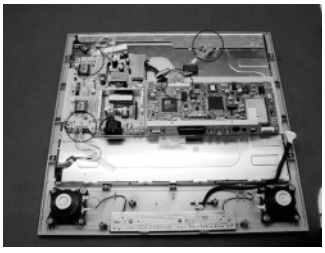
1. Place monitor face down on cushioned table.
   Remove 4 screws from grip on the stand.
   Remove the rear cover by using opening.

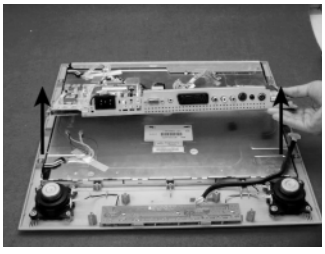
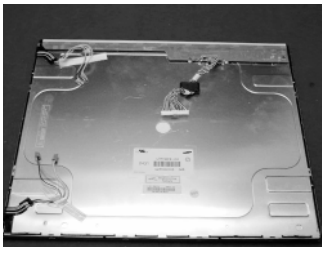
2. Remove rear cover from the monitor.
   Remove 2 screws from the main shield.

3. Remove 6 screws from the main shield cover.
   Disconnect speaker cable and function cable.

4. Lift up the shield cover.
   Disconnect inverter cables, LVDS cable from the main board.

5. Lift up the board.
   This picture is the panel

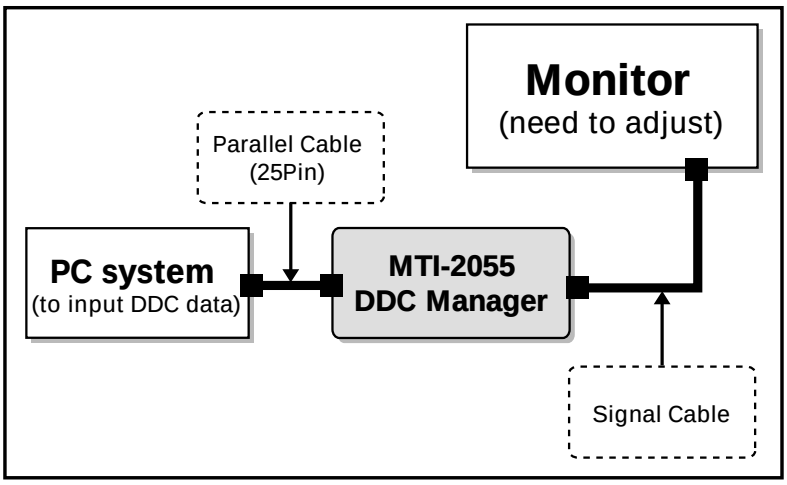
3-2 Reassembly

Reassembly procedures are in the reverse order of disassembly procedures.

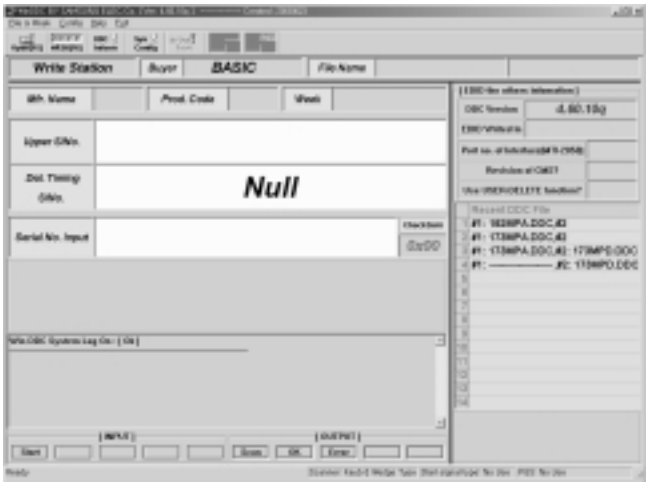
4 Alignments and Adjustments

This section describes to adjust LCD monitor after replacing EEPROM, Main PBA or Panel.

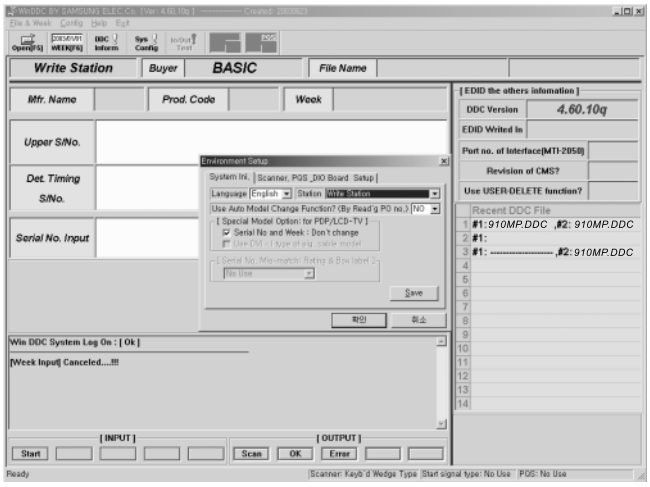
4-1 DDC jig installation



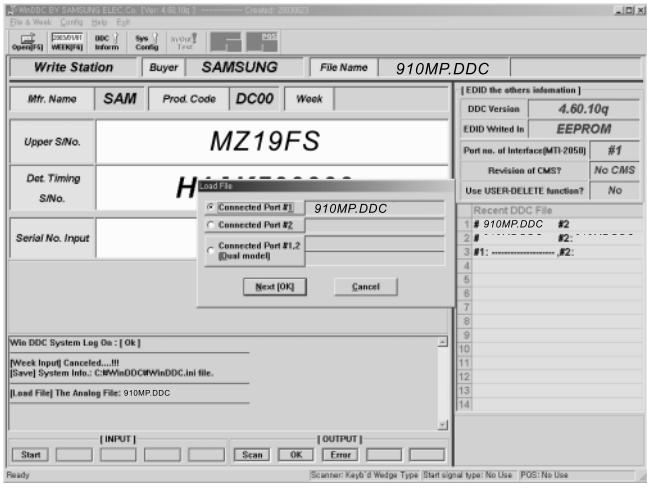
4-2 How to execute DDC



1. Execute "WinDDC.exe"



2. Click “Sys Config”
   Select “Station : Write station”.
   Check “Serial No and Week : Don’t change”
   Click “Save”



3. Click “Open” icon.
   Select “Connected Port #1” and Next “OK”.
   * File Name - 910MP.DDC : Analog
   Press enter key on your keyboard.

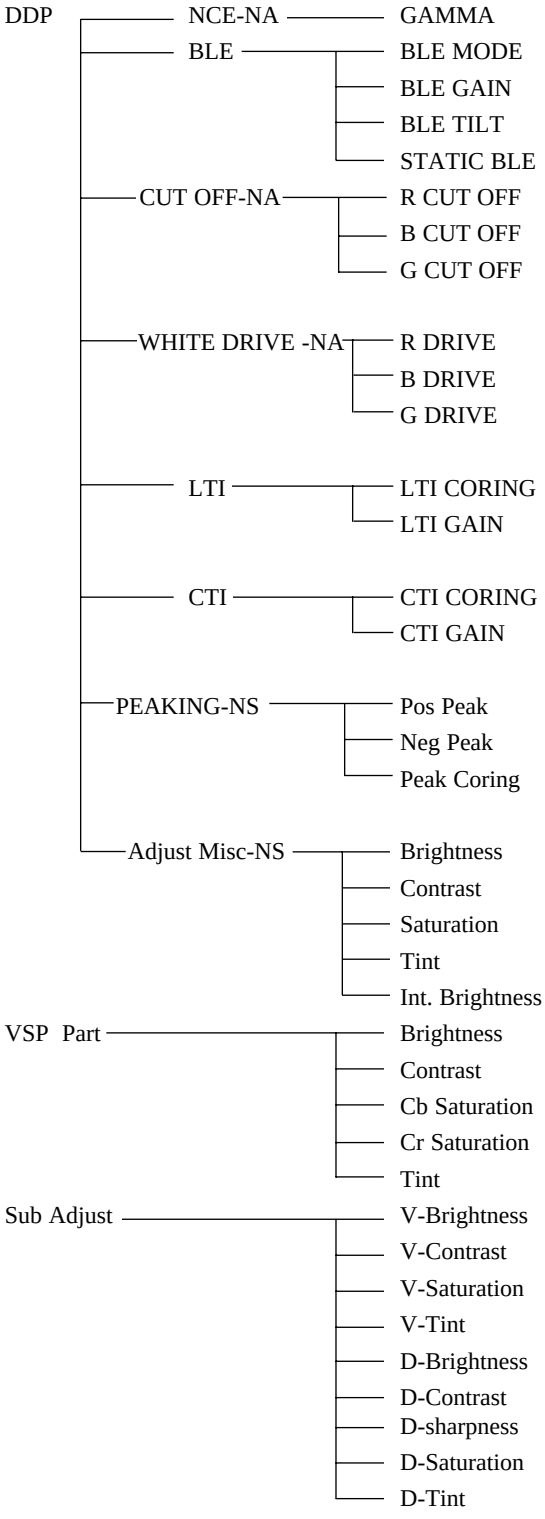
4. Confirm the “DDC OK”.

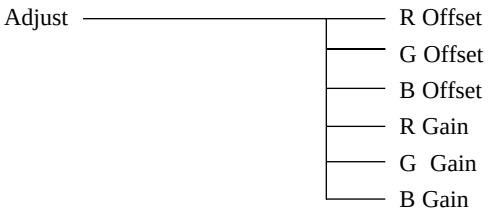
4-3 Factory Mode Adjustments

4-3-1 Factory Mode Admission

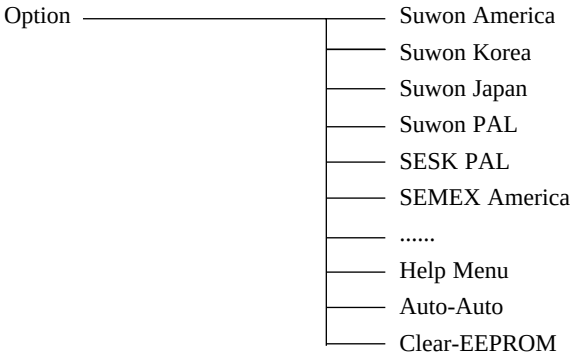
Power off → MUTE → 1 → 8 → 2 → Power on

4-3-2 Factory Mode OSD





PC/DTV Auto Color



Check Sum

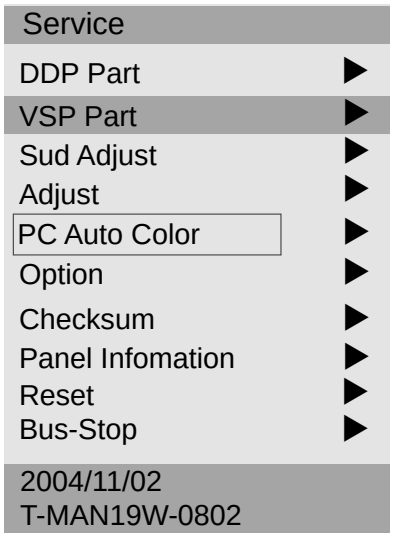
Panel Information

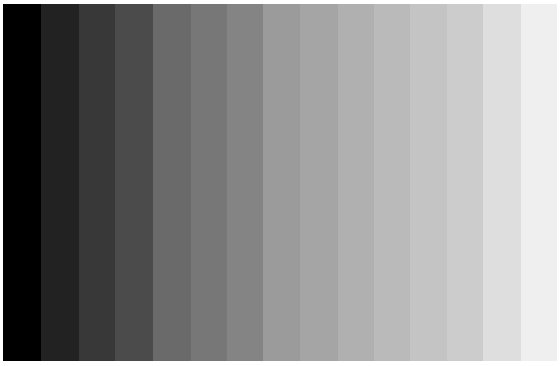
Reset

Bus-Stop

4-3-3 Adjustment(Applicabile Only to Micom Program Adjustments)

- PC Auto Color Adjustment



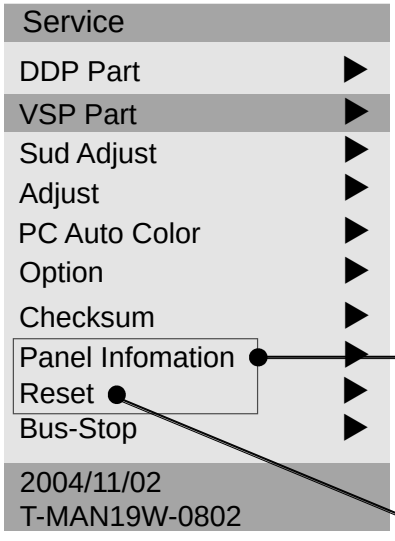


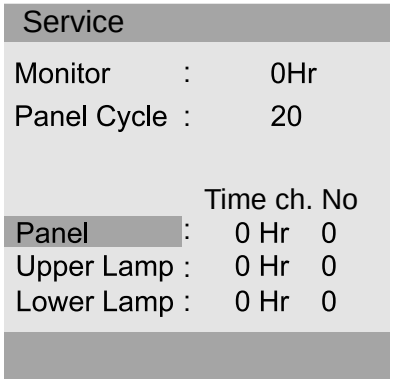
- You may not be able to perfrorm normal color adjustments with any other patterns than with the 16-gray pattern.

PC Auto color
- PC analog : 1280 x 1024/60Hz, 16Gray Pattern
- Equipment Used : MSPG-3240L

4-3-3 Panel Information Adjustment(Applicable to Panel and lamp replacements)

- Panel Information, Reset





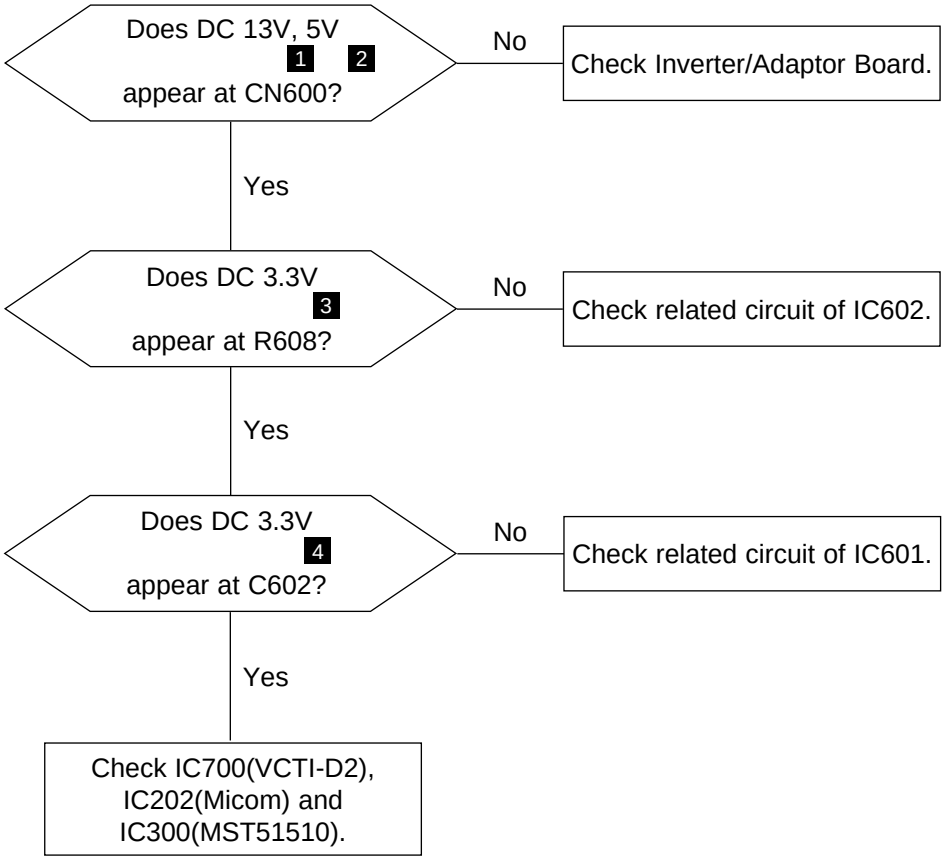
Panel Time Reset : Press the Enter key located on the front of the monitor and hold it for five seconds.(Perform a panel time reset after a panel replacement.)

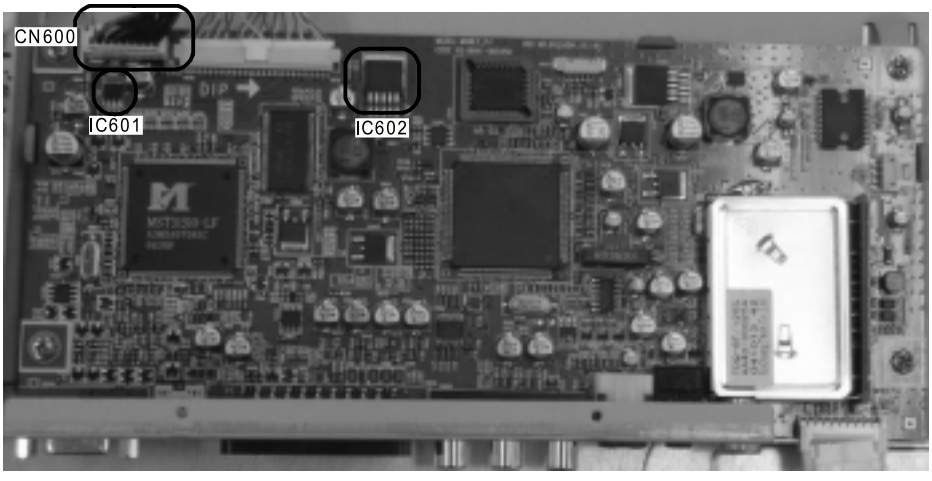
Factory Reset : After performing a reset, turn the main power Off and then ON again.

Memo

5 Troubleshooting

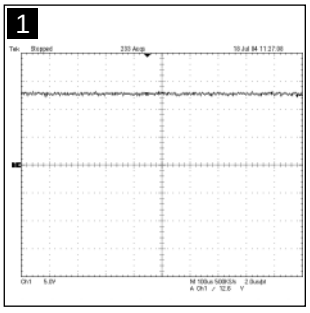
5-1 No Power



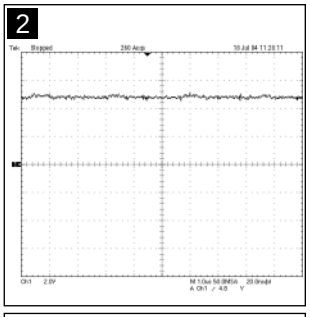


WAVEFORMS

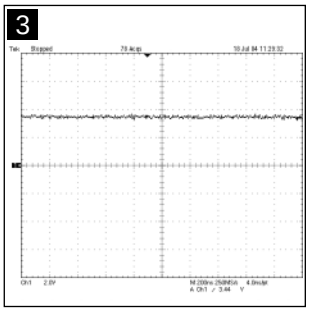
1



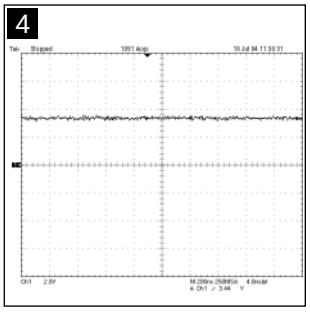
2



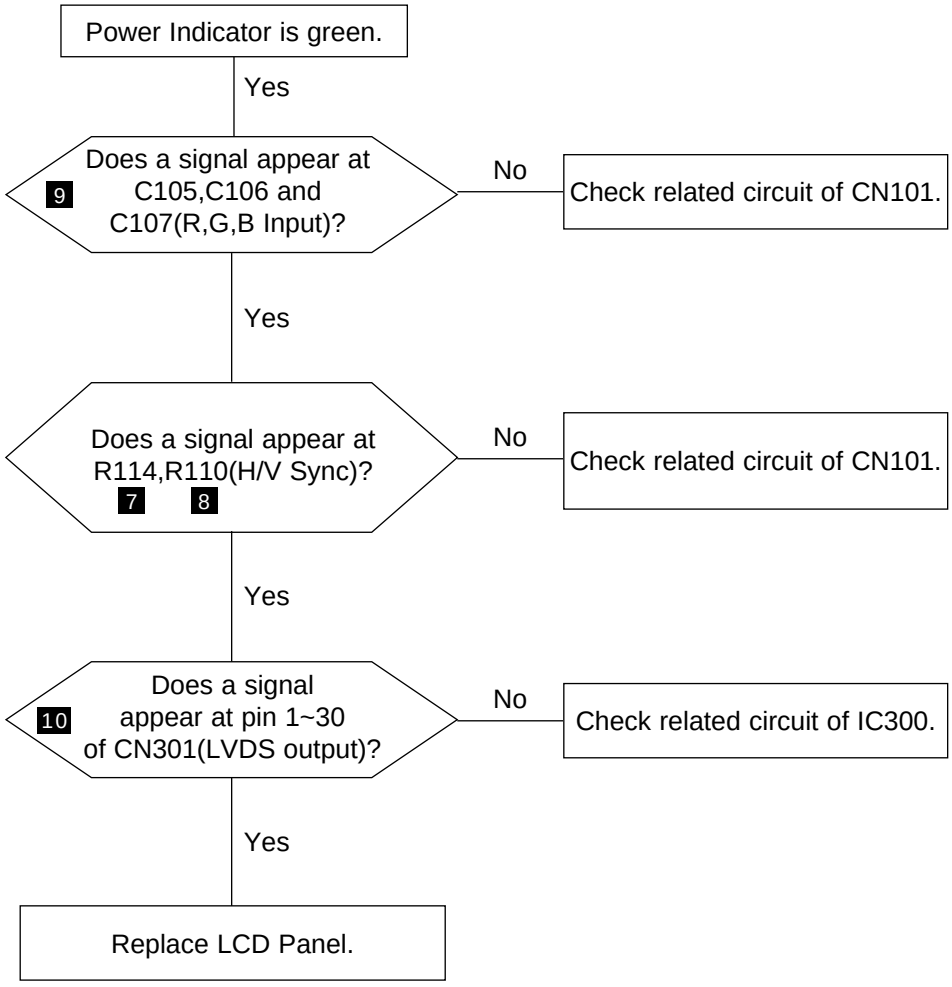
3

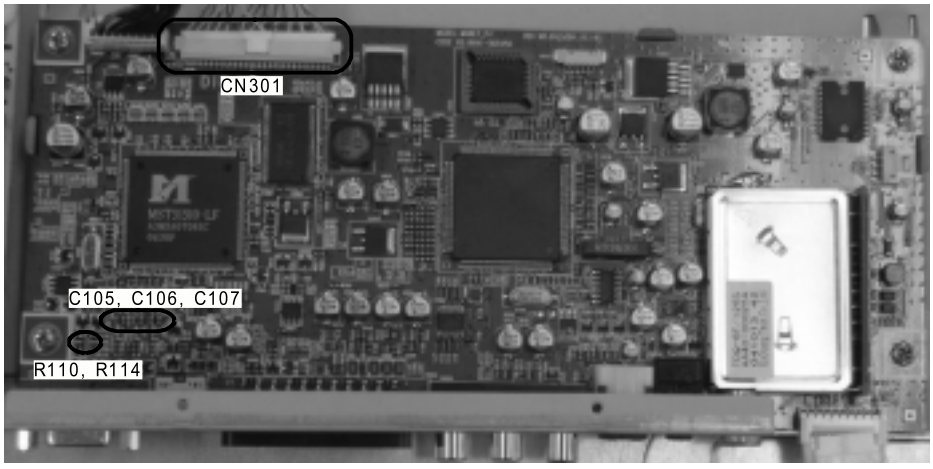


4



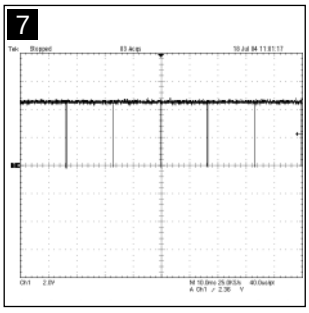
5-2 No Video (PC Signal)



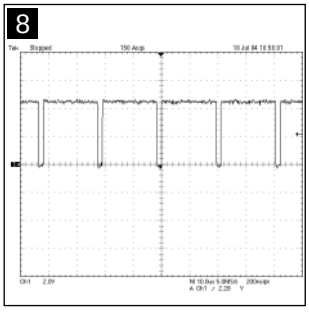


WAVEFORMS

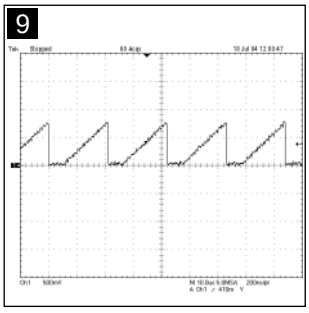
7



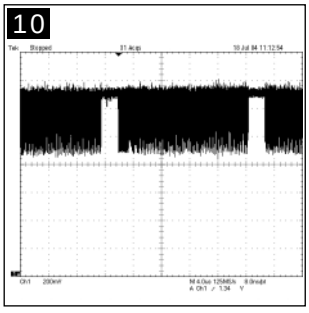
8



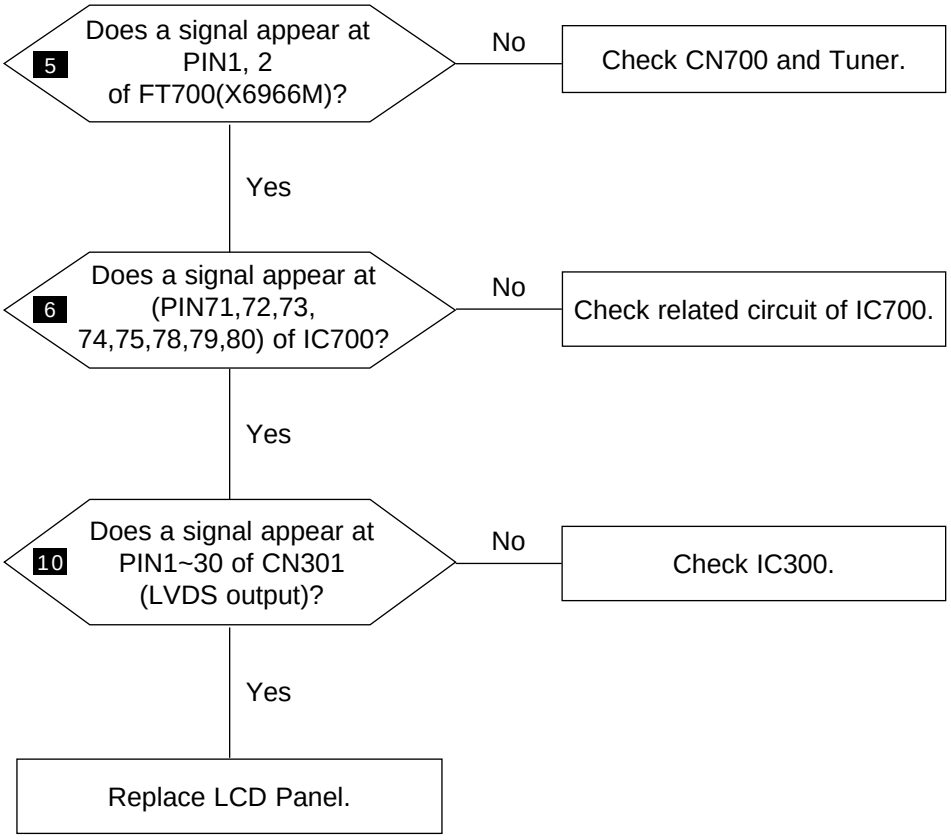
9



10

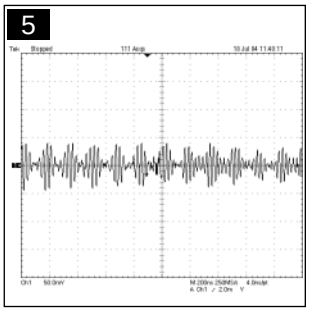


5-3 No Picture (TV)

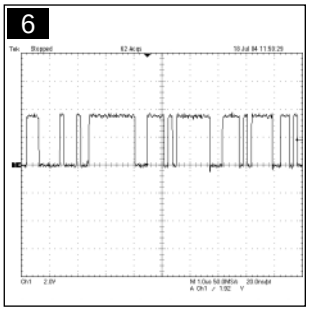


WAVEFORMS

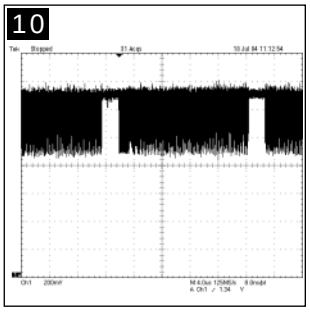
5

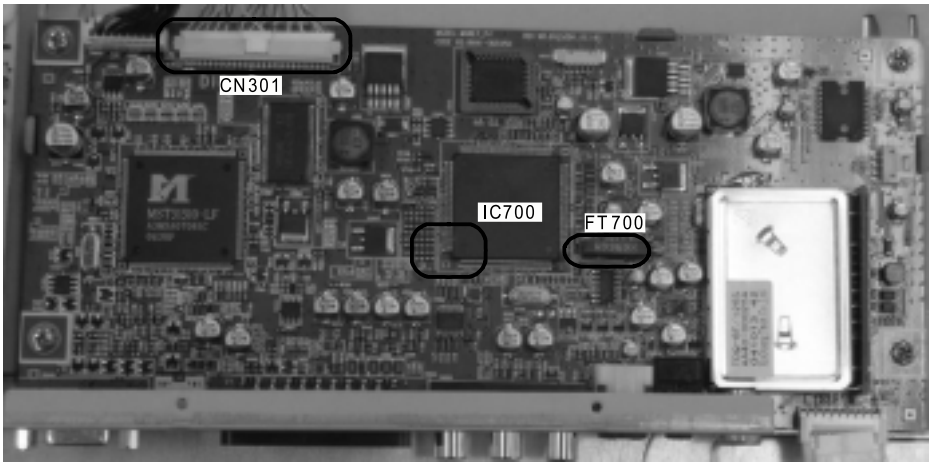


6

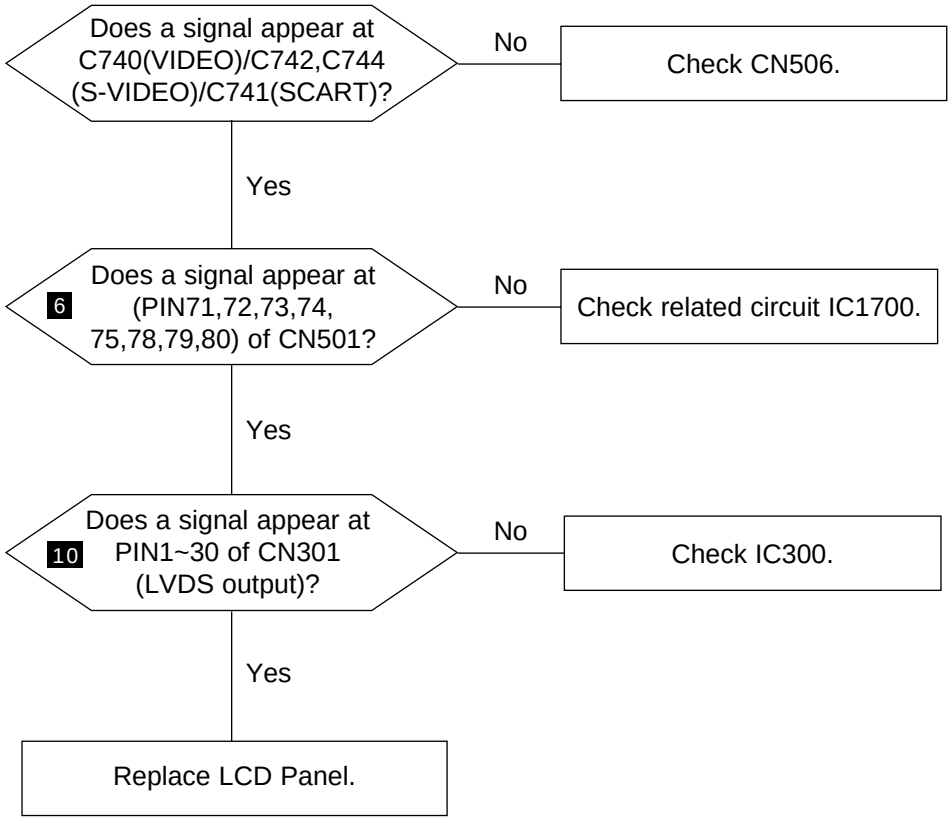


10



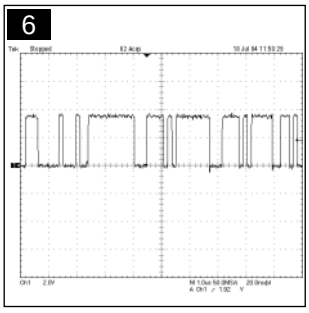


5-4 No Picture (VIDEO/S-VIDEO/SCART)

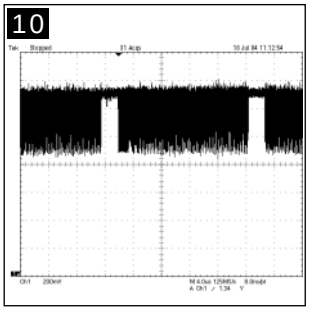


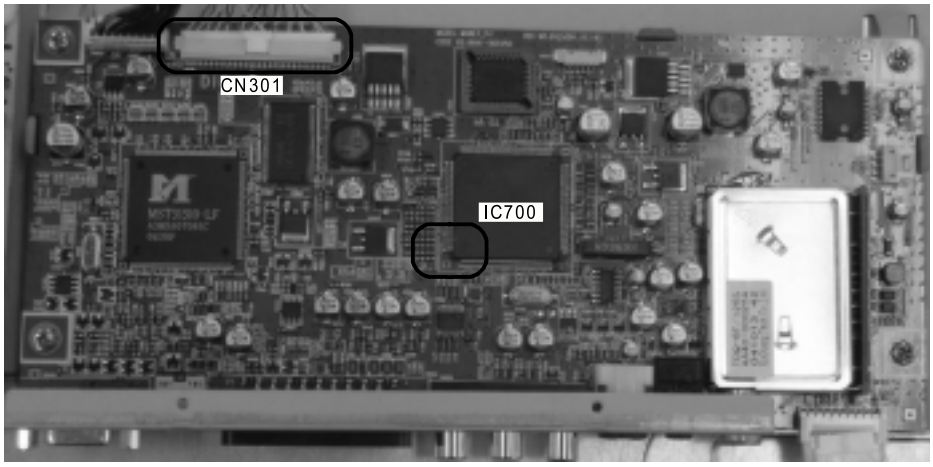
WAVEFORMS

6

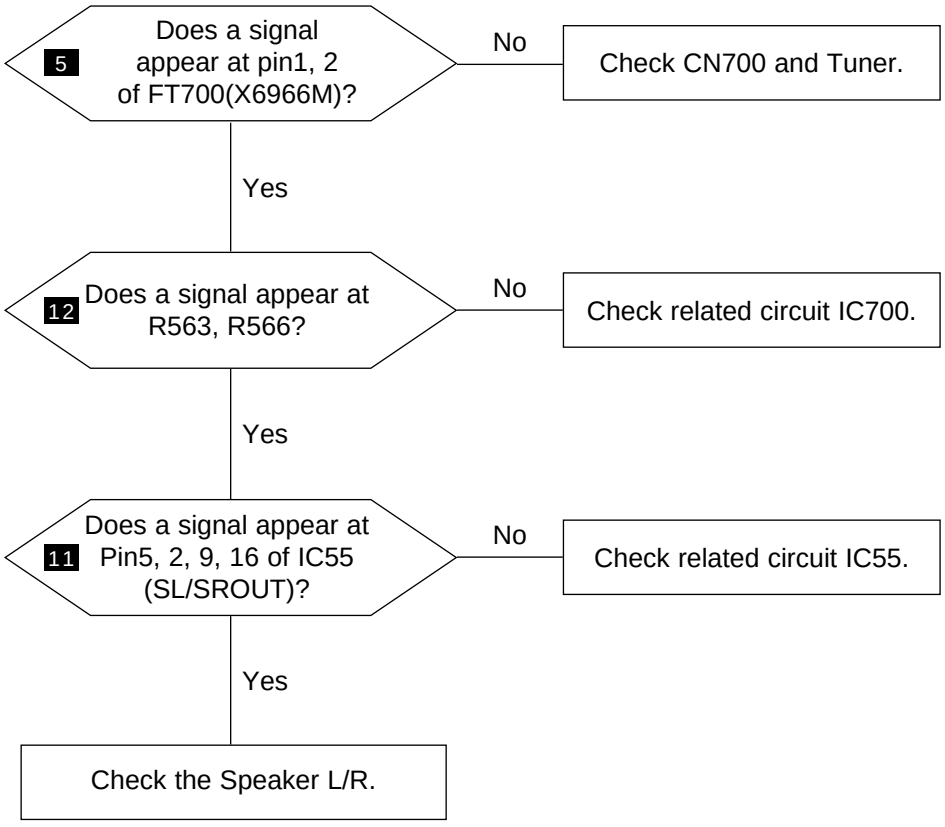


10



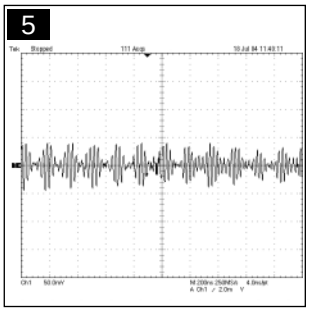


5-5 No Sound(TV)

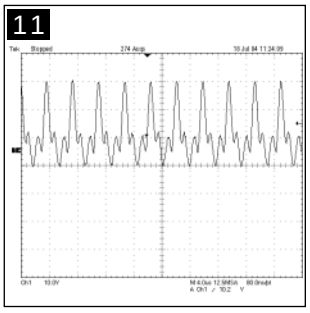


WAVEFORMS

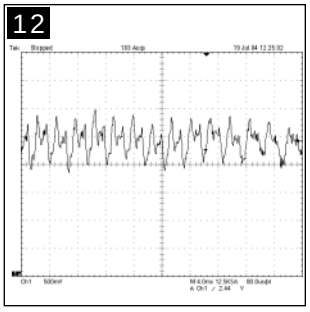
5

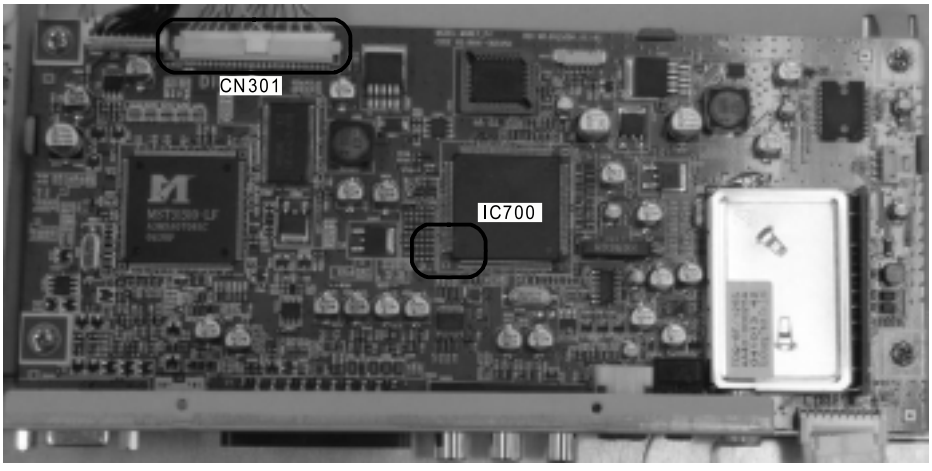


11

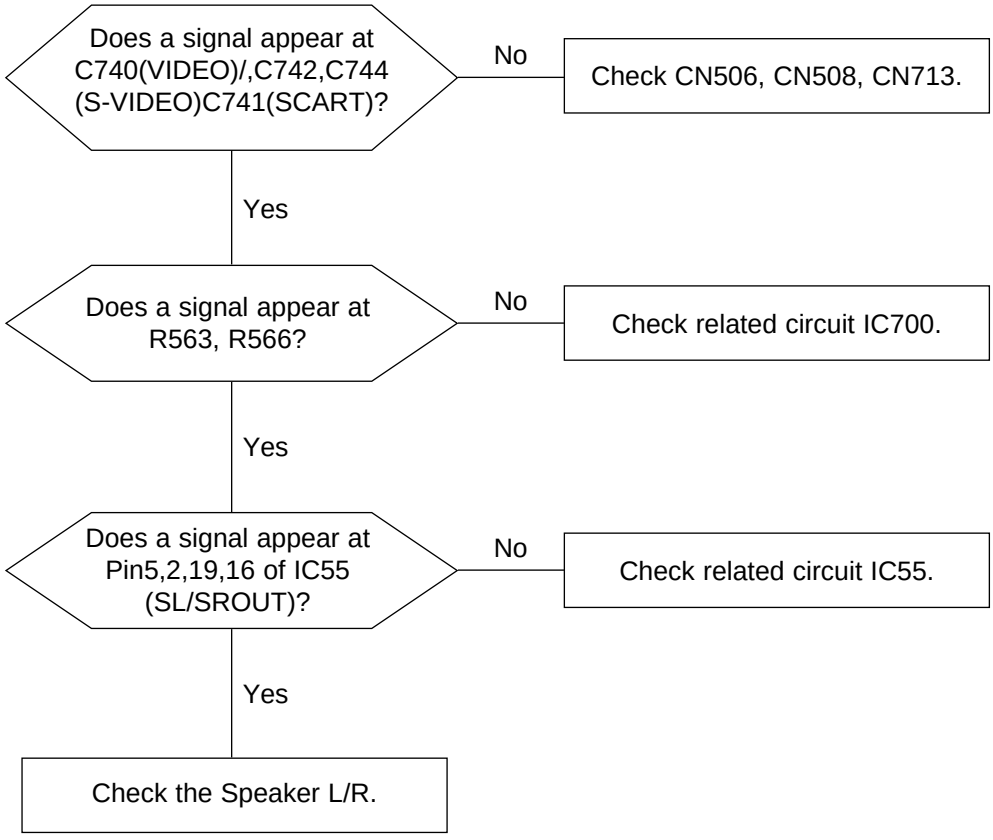


12



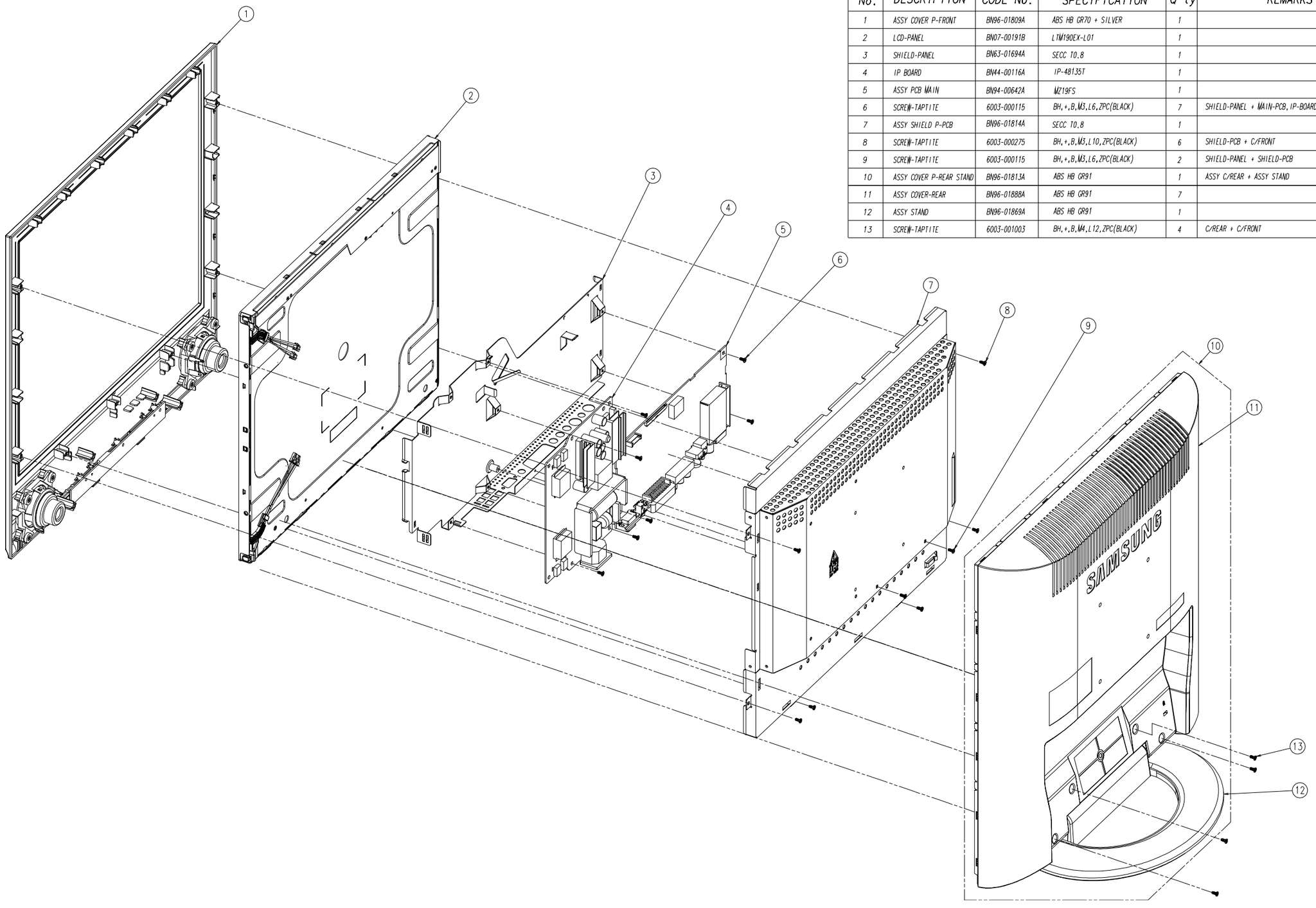


5-6 No Sound(VIDEO,S-VIDEO,SCART)



6 Exploded View and Parts List

✺ You can search for updated part codes through ITSELF web site.
URL : http://itself.sec.samsung.co.kr/



No.	DESCRIPTION	CODE No.	SPECIFICATION	Q'ty	REMARKS	
1	ASSY COVER P-FRONT	BN96-01809A	ABS HB GR70 + SILVER	1		SA
2	LCD-PANEL	BN07-00191B	LTM190EX-L01	1		SA
3	SHIELD-PANEL	BN63-01694A	SECC T0.8	1		SNA
4	IP BOARD	BN44-00116A	IP-48135T	1		SA
5	ASSY PCB MAIN	BN94-00642A	MZ19FS	1		SA
6	SCREW-TAPTITE	6003-000115	BH,+,B,M3,L6,ZPC(BLACK)	7	SHIELD-PANEL + MAIN-PCB,IP-BOARD	SA
7	ASSY SHIELD P-PCB	BN96-01814A	SECC T0.8	1		SNA
8	SCREW-TAPTITE	6003-000275	BH,+,B,M3,L10,ZPC(BLACK)	6	SHIELD-PCB + C/FRONT	SA
9	SCREW-TAPTITE	6003-000115	BH,+,B,M3,L6,ZPC(BLACK)	2	SHIELD-PANEL + SHIELD-PCB	SA
10	ASSY COVER P-REAR STAND	BN96-01813A	ABS HB GR91	1	ASSY C/REAR + ASSY STAND	SA
11	ASSY COVER-REAR	BN96-01888A	ABS HB GR91	7		SA
12	ASSY STAND	BN96-01869A	ABS HB GR91	1		SA
13	SCREW-TAPTITE	6003-001003	BH,+,B,M4,L12,ZPC(BLACK)	4	C/REAR + C/FRONT	SA

Memo

7 Electrical Parts List

❋ You can search for updated part codes through ITSELF web site.
URL : http://itself.sec.samsung.co.kr/

7-1 Main PCB Parts

Level	Code No.	Loc. No.	Description	Specification	Remarks
0	MZ19FS				
1	STZ-MZ19FS	-	1	SDI,TN-ZPD	-
3	BN94-00642A	-	ASSY PCB MAIN	MZ19FS	SNA
4	0204-002420	CIS3	SOLVENT	1M-1000,C3H70H,96,-,-	SNA
4	0204-002426	CIS2	FLUX	DF-201TVS,MIX,0.820,FLUX 13%, 14KG,-	SNA
4	2904-001179	FT700	FILTER-SAW	36.125MHz,-,32.65-39.6MHz/0.5dB,SIP5K,+-0MHz/21.8dB,31.25MHz/37dB	SA
4	3701-001219	CN101	CONNECTOR-DSUB	15P,3R,FEMALE,ANGLE,AUF	SA
4	3711-004531	CN202	CONNECTOR-HEADER	BOX,10P,1R,2mm,ANGLE,SN	SA
4	3711-004712	CN600	CONNECTOR-HEADER	BOX,9P,1R,2mm,STRAIGHT,SN	SA
4	3711-005505	CN700	CONNECTOR-HEADER	NOWALL,11P,1R,2.54mm,ANGLE,SN,WHT	SA
4	3722-000143	CN509	JACK-PHONE	1P(VER),3.4PI,AG,BLK,NO	SA
4	3722-000183	CN506	JACK-SCART	21P,4mm,SN,BLK,NO	SA
4	3722-002081	CN507	JACK-EAR PHONE	5P/2C,-,SnPb,L-BLU,-	SA
4	3722-002267	CN508	JACK-PIN	3P,AU,RED/WHT/YEL,ANGLE	SA
4	3722-002275	CN713	JACK-DIN	4P,-,SN,BLK,-	SA
4	6046-001007	CIS	STAND OFF	M3,L5,NI PLT,SUM24L,#4-40	SNA
4	AA40-00025A	TUNER	TUNER-F/S	TDQ-6F/125S,PAL,181CH,38.9MHZ,75OHM,75OHM,DIN-JACK,ASYMM,5V,TR	SA
4	BN39-00513A	CIS7	LEAD CONNECTOR	MJ17AS(BS),UL1571#30,UL/CSA,30P,160MM,#30,1635L-30,12507HS-30L,BK,1571#30,SJ03-0	SA
4	BN41-00392A	TUNER_PCB	PCB SUB	KD17AS,FR4,2L,MP1.0,1.6T,54*13	SNA
4	BN97-00488A	-	ASSY SMD	MZ19FS	SNA
5	0401-001056	D100	DIODE-SWITCHING	MMBD4148SE,100V,200MA,SOT-23,TP	SA
5	0401-001056	D101	DIODE-SWITCHING	MMBD4148SE,100V,200MA,SOT-23,TP	SA
5	0401-001056	D103	DIODE-SWITCHING	MMBD4148SE,100V,200MA,SOT-23,TP	SA
5	0401-001056	D104	DIODE-SWITCHING	MMBD4148SE,100V,200MA,SOT-23,TP	SA
5	0401-001056	D105	DIODE-SWITCHING	MMBD4148SE,100V,200MA,SOT-23,TP	SA
5	0401-001056	D706	DIODE-SWITCHING	MMBD4148SE,100V,200MA,SOT-23,TP	SA
5	0401-001056	D707	DIODE-SWITCHING	MMBD4148SE,100V,200MA,SOT-23,TP	SA
5	0401-001056	D708	DIODE-SWITCHING	MMBD4148SE,100V,200MA,SOT-23,TP	SA
5	0402-000553	D601	DIODE-RECTIFIER	SS24,40V,2.0A,DO-214AA	SA
5	0402-000553	D603	DIODE-RECTIFIER	SS24,40V,2.0A,DO-214AA	SA
5	0403-000579	D102	DIODE-ZENER	BZX84C5V1,4.8-5.4V,200MW,SOT-23,TP	SA
5	0403-000579	D106	DIODE-ZENER	BZX84C5V1,4.8-5.4V,200MW,SOT-23,TP	SA
5	0403-000579	D107	DIODE-ZENER	BZX84C5V1,4.8-5.4V,200MW,SOT-23,TP	SA
5	0403-000579	D108	DIODE-ZENER	BZX84C5V1,4.8-5.4V,200MW,SOT-23,TP	SA
5	0403-000579	D109	DIODE-ZENER	BZX84C5V1,4.8-5.4V,200MW,SOT-23,TP	SA
5	0403-000579	D120	DIODE-ZENER	BZX84C5V1,4.8-5.4V,200MW,SOT-23,TP	SA
5	0403-000579	D124	DIODE-ZENER	BZX84C5V1,4.8-5.4V,200MW,SOT-23,TP	SA
5	0403-000579	D211	DIODE-ZENER	BZX84C5V1,4.8-5.4V,200MW,SOT-23,TP	SA
5	0403-001382	ZD700	DIODE-ZENER	UDZ33B,32.15-33.79V,200MW,SOD-323,TP	SA
5	0403-001435	D210	DIODE-ZENER	QZX363C5V6,5.32-5.88V,200MW,SOT-363,TP	SA
5	0403-001435	D514	DIODE-ZENER	QZX363C5V6,5.32-5.88V,200MW,SOT-363,TP	SA
5	0406-001163	D501	DIODE-TVS	CDS3C05GTA,6.4V/-/-,-,SMD	SA
5	0406-001163	D503	DIODE-TVS	CDS3C05GTA,6.4V/-/-,-,SMD	SA
5	0406-001163	D507	DIODE-TVS	CDS3C05GTA,6.4V/-/-,-,SMD	SA
5	0406-001163	D508	DIODE-TVS	CDS3C05GTA,6.4V/-/-,-,SMD	SA
5	0406-001163	D509	DIODE-TVS	CDS3C05GTA,6.4V/-/-,-,SMD	SA
5	0406-001163	D510	DIODE-TVS	CDS3C05GTA,6.4V/-/-,-,SMD	SA
5	0406-001163	D511	DIODE-TVS	CDS3C05GTA,6.4V/-/-,-,SMD	SA
5	0406-001163	D512	DIODE-TVS	CDS3C05GTA,6.4V/-/-,-,SMD	SA
5	0406-001163	D513	DIODE-TVS	CDS3C05GTA,6.4V/-/-,-,SMD	SA
5	0406-001163	D515	DIODE-TVS	CDS3C05GTA,6.4V/-/-,-,SMD	SA
5	0406-001163	D516	DIODE-TVS	CDS3C05GTA,6.4V/-/-,-,SMD	SA
5	0406-001163	D517	DIODE-TVS	CDS3C05GTA,6.4V/-/-,-,SMD	SA

Level	Code No.	Loc. No.	Description	Specification	Remarks
5	0406-001163	D518	DIODE-TVS	CDS3C05GTA,6.4V/-/-,-,SMD	SA
5	0406-001163	D703	DIODE-TVS	CDS3C05GTA,6.4V/-/-,-,SMD	SA
5	0406-001163	D704	DIODE-TVS	CDS3C05GTA,6.4V/-/-,-,SMD	SA
5	0406-001163	D705	DIODE-TVS	CDS3C05GTA,6.4V/-/-,-,SMD	SA
5	0501-000280	Q512	TR-SMALL SIGNAL	KSA1182,PNP,150mW,SOT-23,TP,70	SA
5	0501-002080	Q100	TR-SMALL SIGNAL	2SC2412K,NPN,200mW,SC-59,TP,120-270	SA
5	0501-002080	Q300	TR-SMALL SIGNAL	2SC2412K,NPN,200mW,SC-59,TP,120-270	SA
5	0501-002080	Q305	TR-SMALL SIGNAL	2SC2412K,NPN,200mW,SC-59,TP,120-270	SA
5	0501-002080	Q501	TR-SMALL SIGNAL	2SC2412K,NPN,200mW,SC-59,TP,120-270	SA
5	0501-002080	Q502	TR-SMALL SIGNAL	2SC2412K,NPN,200mW,SC-59,TP,120-270	SA
5	0501-002080	Q600	TR-SMALL SIGNAL	2SC2412K,NPN,200mW,SC-59,TP,120-270	SA
5	0501-002080	Q601	TR-SMALL SIGNAL	2SC2412K,NPN,200mW,SC-59,TP,120-270	SA
5	0501-002080	Q603	TR-SMALL SIGNAL	2SC2412K,NPN,200mW,SC-59,TP,120-270	SA
5	0501-002080	Q604	TR-SMALL SIGNAL	2SC2412K,NPN,200mW,SC-59,TP,120-270	SA
5	0501-002080	U2069	TR-SMALL SIGNAL	2SC2412K,NPN,200mW,SC-59,TP,120-270	SA
5	0801-002709	IC702	IC-CMOS LOGIC	74HC373,D FLIP-FLOP,TSSOP,20P,173MIL,OCTAL,TP,PLASTIC,3-STATE,-,0V,-40TO+85C,600	SA
5	0801-002899	IC703	IC-CMOS LOGIC	CD4069UBC,INVERTER,SOIC,14P,8.74x3.99mm,HEX,TP,-,-,-,0.05V,-55to+125C,500mW,4V,-	SA
5	1103-000129	IC100	IC-EEPROM	24C02,256x8,SOP,8P,5x4mm,4.5/5.5V,0to+70C	SA
5	1103-001279	IC201	IC-EEPROM	24C32,4Kx8,SOP,8P,5x4mm,2.5/5.5V,-40to+85C	SA
5	1105-001165	IC302	IC-DRAM	416S1020,512Kx16BITx2,TSOP,50P	SA
5	1201-001980	IC55	IC-AUDIO AMP	TDA7266D,SO,20P,16X11.1MM,-,26DB,PLASTIC,12V,25W,0TO+70C,-,-,-,-,-,TP	SA
5	1201-002136	IC504	IC-AUDIO AMP	LM4810,MSOP,8P,3x3mm,DUAL,-,PLASTIC,5.5V,-,-40 to 85C,-,-,-,-,-,TP	SA
5	1203-001212	IC701	IC-VOL. DETECTOR	7029,SOT-89,3P,-,PLASTIC,-,500	SA
5	1203-001488	IC609	IC-POSI.FIXED REG.	7805,T0-252,3P,-,PLASTIC,4.8/5	SA
5	1203-001816	IC605	IC-POSI.FIXED REG.	78M08,TO-252,3P,-,PLASTIC,7.7/8.3V,1.0W,-40TO+85C,0.5A,-,TP	SA
5	1203-002186	IC607	IC-POSI.FIXED REG.	18,DPAK,3P,240MIL,PLASTIC,1.728/1.872V,-,-40to+125C,1A,-,TP	SA
5	1203-002796	IC602	IC-DC/DC CONVERTER	AP1501-33K5A,TO-263-5L,5P,-,PLASTIC,3.135/3.465V,-,-40TO+125C,3A,-,TP	SA
5	1203-002889	IC603	IC-DC/DC CONVERTER	AP1501-K5A,TO263-5L,5P,10.54x9.65mm,PLASTIC,1.18/1.28V,,-40to+125C,3A,,TP	SA
5	1203-002898	IC606	IC-POSI.FIXED REG.	G950T45R,T0-252,3P,6.54x6.46mm,PLASTIC,2.475/2.575V,,0to+125C,1A,,TP	SA
5	1205-002518	IC300	IC-LCD CONTROLLER	MST51510,LQFP,256P,-,PLASTIC,3.3V,-,0to+70C,TR,IC-LCD CONTROLLER	SA
5	2007-000043	R156	R-CHIP	1Kohm,1%,1/10W,TP,1608	SA
5	2007-000043	R157	R-CHIP	1Kohm,1%,1/10W,TP,1608	SA
5	2007-000043	R240	R-CHIP	1Kohm,1%,1/10W,TP,1608	SA
5	2007-000043	R241	R-CHIP	1Kohm,1%,1/10W,TP,1608	SA
5	2007-000043	R628	R-CHIP	1Kohm,1%,1/10W,TP,1608	SA
5	2007-000066	R603	R-CHIP	20Kohm,1%,1/10W,TP,1608	SA
5	2007-000070	R110	R-CHIP	0ohm,5%,1/10W,TP,1608	SA
5	2007-000070	R114	R-CHIP	0ohm,5%,1/10W,TP,1608	SA
5	2007-000070	R219	R-CHIP	0ohm,5%,1/10W,TP,1608	SA
5	2007-000070	R220	R-CHIP	0ohm,5%,1/10W,TP,1608	SA
5	2007-000070	R221	R-CHIP	0ohm,5%,1/10W,TP,1608	SA
5	2007-000070	R223	R-CHIP	0ohm,5%,1/10W,TP,1608	SA
5	2007-000070	R224	R-CHIP	0ohm,5%,1/10W,TP,1608	SA
5	2007-000070	R225	R-CHIP	0ohm,5%,1/10W,TP,1608	SA
5	2007-000070	R230	R-CHIP	0ohm,5%,1/10W,TP,1608	SA
5	2007-000070	R366	R-CHIP	0ohm,5%,1/10W,TP,1608	SA
5	2007-000070	R530	R-CHIP	0ohm,5%,1/10W,TP,1608	SA
5	2007-000070	R560	R-CHIP	0ohm,5%,1/10W,TP,1608	SA
5	2007-000070	R608	R-CHIP	0ohm,5%,1/10W,TP,1608	SA
5	2007-000070	T113	R-CHIP	0ohm,5%,1/10W,TP,1608	SA
5	2007-000070	T117	R-CHIP	0ohm,5%,1/10W,TP,1608	SA
5	2007-000070	T120	R-CHIP	0ohm,5%,1/10W,TP,1608	SA
5	2007-000070	T121	R-CHIP	0ohm,5%,1/10W,TP,1608	SA
5	2007-000070	T143	R-CHIP	0ohm,5%,1/10W,TP,1608	SA
5	2007-000070	T26	R-CHIP	0ohm,5%,1/10W,TP,1608	SA
5	2007-000070	T29	R-CHIP	0ohm,5%,1/10W,TP,1608	SA
5	2007-000070	T30	R-CHIP	0ohm,5%,1/10W,TP,1608	SA
5	2007-000070	T31	R-CHIP	0ohm,5%,1/10W,TP,1608	SA
5	2007-000070	T35	R-CHIP	0ohm,5%,1/10W,TP,1608	SA
5	2007-000072	R589	R-CHIP	47ohm,5%,1/10W,TP,1608	SA
5	2007-000072	R590	R-CHIP	47ohm,5%,1/10W,TP,1608	SA

Level	Code No.	Loc. No.	Description	Specification	Remarks
5	2007-000074	R101	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	2007-000074	R102	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	2007-000074	R105	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	2007-000074	R117	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	2007-000074	R118	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	2007-000074	R119	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	2007-000074	R120	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	2007-000074	R123	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	2007-000074	R124	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	2007-000074	R125	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	2007-000074	R212	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	2007-000074	R226	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	2007-000074	R228	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	2007-000074	R335	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	2007-000074	R518	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	2007-000074	R520	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	2007-000074	R524	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	2007-000074	R526	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	2007-000074	R528	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	2007-000074	R533	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	2007-000074	R586	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	2007-000074	R7103	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	2007-000074	R7109	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	2007-000074	R7110	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	2007-000074	R7135	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	2007-000074	R7136	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	2007-000074	R7137	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	2007-000074	R7138	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	2007-000074	R7139	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	2007-000074	R7140	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	2007-000074	R7141	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	2007-000074	R723	R-CHIP	100ohm,5%,1/10W,TP,1608	SA
5	2007-000076	R542	R-CHIP	330ohm,5%,1/10W,TP,1608	SA
5	2007-000076	R544	R-CHIP	330ohm,5%,1/10W,TP,1608	SA
5	2007-000076	R621	R-CHIP	330ohm,5%,1/10W,TP,1608	SA
5	2007-000077	R521	R-CHIP	470ohm,5%,1/10W,TP,1608	SA
5	2007-000078	R336	R-CHIP	1Kohm,5%,1/10W,TP,1608	SA
5	2007-000078	R392	R-CHIP	1Kohm,5%,1/10W,TP,1608	SA
5	2007-000078	R501	R-CHIP	1Kohm,5%,1/10W,TP,1608	SA
5	2007-000078	R510	R-CHIP	1Kohm,5%,1/10W,TP,1608	SA
5	2007-000078	R512	R-CHIP	1Kohm,5%,1/10W,TP,1608	SA
5	2007-000078	R517	R-CHIP	1Kohm,5%,1/10W,TP,1608	SA
5	2007-000078	R519	R-CHIP	1Kohm,5%,1/10W,TP,1608	SA
5	2007-000078	R523	R-CHIP	1Kohm,5%,1/10W,TP,1608	SA
5	2007-000078	R525	R-CHIP	1Kohm,5%,1/10W,TP,1608	SA
5	2007-000078	R527	R-CHIP	1Kohm,5%,1/10W,TP,1608	SA
5	2007-000078	R532	R-CHIP	1Kohm,5%,1/10W,TP,1608	SA
5	2007-000078	R563	R-CHIP	1Kohm,5%,1/10W,TP,1608	SA
5	2007-000078	R566	R-CHIP	1Kohm,5%,1/10W,TP,1608	SA
5	2007-000078	R7132	R-CHIP	1Kohm,5%,1/10W,TP,1608	SA
5	2007-000078	R7133	R-CHIP	1Kohm,5%,1/10W,TP,1608	SA
5	2007-000078	R757	R-CHIP	1Kohm,5%,1/10W,TP,1608	SA
5	2007-000081	R111	R-CHIP	2.7Kohm,5%,1/10W,TP,1608	SA
5	2007-000082	R765	R-CHIP	3.3Kohm,5%,1/10W,TP,1608	SA
5	2007-000084	R129	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	SA
5	2007-000084	R130	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	SA
5	2007-000084	R131	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	SA
5	2007-000084	R348	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	SA
5	2007-000084	R371	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	SA
5	2007-000084	R391	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	SA
5	2007-000084	R393	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	SA

Level	Code No.	Loc. No.	Description	Specification	Remarks
5	2007-000084	R601	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	SA
5	2007-000084	R602	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	SA
5	2007-000084	R7142	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	SA
5	2007-000084	R781	R-CHIP	4.7Kohm,5%,1/10W,TP,1608	SA
5	2007-000087	R743	R-CHIP	6.8Kohm,5%,1/10W,TP,1608	SA
5	2007-000087	R744	R-CHIP	6.8Kohm,5%,1/10W,TP,1608	SA
5	2007-000087	R745	R-CHIP	6.8Kohm,5%,1/10W,TP,1608	SA
5	2007-000090	R116	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	2007-000090	R121	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	2007-000090	R306	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	2007-000090	R307	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	2007-000090	R378	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	2007-000090	R379	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	2007-000090	R380	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	2007-000090	R381	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	2007-000090	R394	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	2007-000090	R516	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	2007-000090	R535	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	2007-000090	R536	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	2007-000090	R539	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	2007-000090	R545	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	2007-000090	R557	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	2007-000090	R564	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	2007-000090	R605	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	2007-000090	R606	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	2007-000090	R607	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	2007-000090	R615	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	2007-000090	R616	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	2007-000090	R617	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	2007-000090	R623	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	2007-000090	R624	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	2007-000090	R625	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	2007-000090	R626	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	2007-000090	R7130	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	2007-000090	R7145	R-CHIP	10Kohm,5%,1/10W,TP,1608	SA
5	2007-000092	R103	R-CHIP	15Kohm,5%,1/10W,TP,1608	SA
5	2007-000092	R104	R-CHIP	15Kohm,5%,1/10W,TP,1608	SA
5	2007-000097	R559	R-CHIP	47Kohm,5%,1/10W,TP,1608	SA
5	2007-000097	R562	R-CHIP	47Kohm,5%,1/10W,TP,1608	SA
5	2007-000098	R548	R-CHIP	56Kohm,5%,1/10W,TP,1608	SA
5	2007-000098	R549	R-CHIP	56Kohm,5%,1/10W,TP,1608	SA
5	2007-000102	R612	R-CHIP	100Kohm,5%,1/10W,TP,1608	SA
5	2007-000102	R613	R-CHIP	100Kohm,5%,1/10W,TP,1608	SA
5	2007-000102	R614	R-CHIP	100Kohm,5%,1/10W,TP,1608	SA
5	2007-000102	R620	R-CHIP	100Kohm,5%,1/10W,TP,1608	SA
5	2007-000102	R627	R-CHIP	100Kohm,5%,1/10W,TP,1608	SA
5	2007-000102	R7131	R-CHIP	100Kohm,5%,1/10W,TP,1608	SA
5	2007-000102	R746	R-CHIP	100Kohm,5%,1/10W,TP,1608	SA
5	2007-000118	R301	R-CHIP	390ohm,5%,1/10W,TP,1608	SA
5	2007-000402	R531	R-CHIP	150ohm,5%,1/10W,TP,1608	SA
5	2007-000458	R522	R-CHIP	18Kohm,5%,1/10W,TP,1608	SA
5	2007-000842	R604	R-CHIP	3Kohm,1%,1/10W,TP,1608	SA
5	2007-000869	R701	R-CHIP	4.7Kohm,1%,1/10W,TP,1608	SA
5	2007-000869	R7107	R-CHIP	4.7Kohm,1%,1/10W,TP,1608	SA
5	2007-000869	R7108	R-CHIP	4.7Kohm,1%,1/10W,TP,1608	SA
5	2007-001164	R108	R-CHIP	75ohm,1%,1/10W,TP,1608	SA
5	2007-001164	R109	R-CHIP	75ohm,1%,1/10W,TP,1608	SA
5	2007-001164	R122	R-CHIP	75ohm,1%,1/10W,TP,1608	SA
5	2007-001167	R529	R-CHIP	75ohm,5%,1/10W,TP,1608	SA
5	2007-001167	R768	R-CHIP	75ohm,5%,1/10W,TP,1608	SA
5	2007-001167	R769	R-CHIP	75ohm,5%,1/10W,TP,1608	SA

Level	Code No.	Loc. No.	Description	Specification	Remarks
5	2007-001167	R770	R-CHIP	75ohm,5%,1/10W,TP,1608	SA
5	2007-001167	R771	R-CHIP	75ohm,5%,1/10W,TP,1608	SA
5	2007-001167	R772	R-CHIP	75ohm,5%,1/10W,TP,1608	SA
5	2007-001167	R773	R-CHIP	75ohm,5%,1/10W,TP,1608	SA
5	2007-001167	R774	R-CHIP	75ohm,5%,1/10W,TP,1608	SA
5	2007-001167	R775	R-CHIP	75ohm,5%,1/10W,TP,1608	SA
5	2007-001179	R703	R-CHIP	8.2Kohm,5%,1/10W,TP,1608	SA
5	2007-007852	R534	R-CHIP	140ohm,1%,1/10W,TP,1608	SA
5	2011-000881	RA301	R-NET	33ohm,5%,1/16W,L,CHIP,8P,TP,3.2x1.6x0.5mm	SA
5	2011-000881	RA302	R-NET	33ohm,5%,1/16W,L,CHIP,8P,TP,3.2x1.6x0.5mm	SA
5	2011-000881	RA303	R-NET	33ohm,5%,1/16W,L,CHIP,8P,TP,3.2x1.6x0.5mm	SA
5	2011-000881	RA304	R-NET	33ohm,5%,1/16W,L,CHIP,8P,TP,3.2x1.6x0.5mm	SA
5	2011-000881	RA305	R-NET	33ohm,5%,1/16W,L,CHIP,8P,TP,3.2x1.6x0.5mm	SA
5	2203-000140	C505	C-CER,CHIP	1.5nF,10%,50V,X7R,TP,1608,-	SA
5	2203-000140	C506	C-CER,CHIP	1.5nF,10%,50V,X7R,TP,1608,-	SA
5	2203-000140	C507	C-CER,CHIP	1.5nF,10%,50V,X7R,TP,1608,-	SA
5	2203-000140	C508	C-CER,CHIP	1.5nF,10%,50V,X7R,TP,1608,-	SA
5	2203-000140	C517	C-CER,CHIP	1.5nF,10%,50V,X7R,TP,1608,-	SA
5	2203-000140	C518	C-CER,CHIP	1.5nF,10%,50V,X7R,TP,1608,-	SA
5	2203-000140	C521	C-CER,CHIP	1.5nF,10%,50V,X7R,TP,1608,-	SA
5	2203-000140	C522	C-CER,CHIP	1.5nF,10%,50V,X7R,TP,1608,-	SA
5	2203-000140	C578	C-CER,CHIP	1.5nF,10%,50V,X7R,TP,1608,-	SA
5	2203-000140	C579	C-CER,CHIP	1.5nF,10%,50V,X7R,TP,1608,-	SA
5	2203-000189	C105	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000189	C106	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000189	C107	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000189	C110	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000189	C111	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000189	C112	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000189	C208	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000189	C209	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000189	C528	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000189	C529	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000189	C547	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000189	C554	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000189	C556	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000189	C580	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000189	C581	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000189	C614	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000189	C617	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000189	C618	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000189	C628	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000189	C629	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000189	C632	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000189	C633	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000189	C723	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000189	C730	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000189	C731	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000189	C733	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000189	C740	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000189	C741	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000189	C742	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000189	C743	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000189	C744	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000189	C745	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000189	C746	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000189	C758	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000189	C759	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000189	C760	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000189	C765	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000189	C766	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA

Level	Code No.	Loc. No.	Description	Specification	Remarks
5	2203-000189	C767	C-CER,CHIP	100nF,+80-20%,25V,Y5V,TP,1608,	SA
5	2203-000236	C102	C-CER,CHIP	0.1nF,5%,50V,C0G,1608	SA
5	2203-000257	C613	C-CER,CHIP	10nF,10%,50V,X7R,1608	SA
5	2203-000257	C621	C-CER,CHIP	10nF,10%,50V,X7R,1608	SA
5	2203-000257	C705	C-CER,CHIP	10nF,10%,50V,X7R,1608	SA
5	2203-000440	C352	C-CER,CHIP	1nF,10%,50V,X7R,TP,1608,-	SA
5	2203-000440	C354	C-CER,CHIP	1nF,10%,50V,X7R,TP,1608,-	SA
5	2203-000440	C728	C-CER,CHIP	1nF,10%,50V,X7R,TP,1608,-	SA
5	2203-000440	C729	C-CER,CHIP	1nF,10%,50V,X7R,TP,1608,-	SA
5	2203-000440	C737	C-CER,CHIP	1nF,10%,50V,X7R,TP,1608,-	SA
5	2203-000440	C739	C-CER,CHIP	1nF,10%,50V,X7R,TP,1608,-	SA
5	2203-000440	C761	C-CER,CHIP	1nF,10%,50V,X7R,TP,1608,-	SA
5	2203-000440	C768	C-CER,CHIP	1nF,10%,50V,X7R,TP,1608,-	SA
5	2203-000626	C101	C-CER,CHIP	0.022nF,5%,50V,C0G,TP,1608	SA
5	2203-000626	C367	C-CER,CHIP	0.022nF,5%,50V,C0G,TP,1608	SA
5	2203-000626	C368	C-CER,CHIP	0.022nF,5%,50V,C0G,TP,1608	SA
5	2203-000626	C735	C-CER,CHIP	0.022nF,5%,50V,C0G,TP,1608	SA
5	2203-000626	C736	C-CER,CHIP	0.022nF,5%,50V,C0G,TP,1608	SA
5	2203-000903	C103	C-CER,CHIP	0.0047NF,0.25PF,50V,C0G,TP,1608	SA
5	2203-000903	C104	C-CER,CHIP	0.0047NF,0.25PF,50V,C0G,TP,1608	SA
5	2203-000903	C115	C-CER,CHIP	0.0047NF,0.25PF,50V,C0G,TP,1608	SA
5	2203-000903	C378	C-CER,CHIP	0.0047NF,0.25PF,50V,C0G,TP,1608	SA
5	2203-000972	C350	C-CER,CHIP	47nF,10%,16V,X7R,TP,1608	SA
5	2203-000972	C351	C-CER,CHIP	47nF,10%,16V,X7R,TP,1608	SA
5	2203-000972	C353	C-CER,CHIP	47nF,10%,16V,X7R,TP,1608	SA
5	2203-001071	C203	C-CER,CHIP	0.056NF,5%,50V,C0G,TP,1608	SA
5	2203-005005	C100	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	2203-005005	C341	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	2203-005005	C344	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	2203-005005	C355	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	2203-005005	C356	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	2203-005005	C381	C-CER,CHIP	100nF,10%,16V,X7R,TP,1608	SA
5	2203-005065	C108	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C109	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C113	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C204	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C205	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C206	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C300	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C301	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C302	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C303	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C304	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C305	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C306	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C307	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C308	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C309	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C311	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C312	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C313	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C314	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C315	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C316	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C317	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C318	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C319	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C320	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C321	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C322	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C323	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA

Level	Code No.	Loc. No.	Description	Specification	Remarks
5	2203-005065	C370	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C371	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C372	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C373	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C374	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C375	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C376	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C377	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C502	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C513	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C610	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C611	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C622	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C623	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C625	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C636	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C701	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C702	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C703	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C704	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C709	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C710	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C711	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C712	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C713	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C714	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C715	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C716	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C717	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C718	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C719	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005065	C732	C-CER,CHIP	1000nF,+80-20%,10V,Y5V,-,1608	SA
5	2203-005249	C763	C-CER,CHIP	100nF,10%,50V,X7R,TP,1608,-	SA
5	2203-005437	C382	C-CER,CHIP	10000nF,+80-20%,10V,Y5V,TP,3216	SA
5	2203-005437	C546	C-CER,CHIP	10000nF,+80-20%,10V,Y5V,TP,3216	SA
5	2402-000108	C624	C-AL,SMD	10uF,20%,16V,WT,TP,4.3x4.3x5.4	SA
5	2402-001081	C601	C-AL,SMD	100uF,20%,25V,WT,TP,8.3x8.3x10	SA
5	2402-001081	C619	C-AL,SMD	100uF,20%,25V,WT,TP,8.3x8.3x10	SA
5	2402-001081	C631	C-AL,SMD	100uF,20%,25V,WT,TP,8.3x8.3x10	SA
5	2402-001086	C510	C-AL,SMD	100UF,20%,16V,WT,TP,6.6X6.6X5.3	SA
5	2402-001086	C511	C-AL,SMD	100UF,20%,16V,WT,TP,6.6X6.6X5.3	SA
5	2402-001086	C512	C-AL,SMD	100UF,20%,16V,WT,TP,6.6X6.6X5.3	SA
5	2402-001086	C514	C-AL,SMD	100UF,20%,16V,WT,TP,6.6X6.6X5.3	SA
5	2402-001086	C515	C-AL,SMD	100UF,20%,16V,WT,TP,6.6X6.6X5.3	SA
5	2402-001086	C516	C-AL,SMD	100UF,20%,16V,WT,TP,6.6X6.6X5.3	SA
5	2402-001086	C523	C-AL,SMD	100UF,20%,16V,WT,TP,6.6X6.6X5.3	SA
5	2402-001086	C524	C-AL,SMD	100UF,20%,16V,WT,TP,6.6X6.6X5.3	SA
5	2402-001086	C602	C-AL,SMD	100UF,20%,16V,WT,TP,6.6X6.6X5.3	SA
5	2402-001128	C535	C-AL,SMD	100UF,20%,16V,WT,TP,6.3X5.7MM	SA
5	2402-001128	C555	C-AL,SMD	100UF,20%,16V,WT,TP,6.3X5.7MM	SA
5	2402-001128	C558	C-AL,SMD	100UF,20%,16V,WT,TP,6.3X5.7MM	SA
5	2402-001128	C615	C-AL,SMD	100UF,20%,16V,WT,TP,6.3X5.7MM	SA
5	2402-001128	C616	C-AL,SMD	100UF,20%,16V,WT,TP,6.3X5.7MM	SA
5	2402-001128	C620	C-AL,SMD	100UF,20%,16V,WT,TP,6.3X5.7MM	SA
5	2402-001128	C634	C-AL,SMD	100UF,20%,16V,WT,TP,6.3X5.7MM	SA
5	2402-001128	C635	C-AL,SMD	100UF,20%,16V,WT,TP,6.3X5.7MM	SA
5	2402-001158	C565	C-AL,SMD	1UF,20%,50V,WT,TP,4X5.2MM	SA
5	2402-001159	C536	C-AL,SMD	3.3UF,20%,50V,WT,TP,4X5.2MM	SA
5	2402-001159	C538	C-AL,SMD	3.3UF,20%,50V,WT,TP,4X5.2MM	SA
5	2402-001159	C769	C-AL,SMD	3.3UF,20%,50V,WT,TP,4X5.2MM	SA
5	2402-001159	C770	C-AL,SMD	3.3UF,20%,50V,WT,TP,4X5.2MM	SA

Level	Code No.	Loc. No.	Description	Specification	Remarks
5	2402-001165	C734	C-AL,SMD	4.7UF,20%,35V,WT,TP,4X5.8MM	SA
5	2402-001222	C721	C-AL,SMD	3.3UF,20%,50V,HR,TP,4.3X4.3X5.8MM	SA
5	2409-001065	C627	C-ORGANIC	82UF,20%,16V,WT,TP,8X6.9MM,-	SA
5	2703-000398	L702	INDUCTOR-SMD	10uH,10%,3225	SA
5	2703-000398	L703	INDUCTOR-SMD	10uH,10%,3225	SA
5	2703-001334	L200	INDUCTOR-SMD	1.5uH,10%,2012	SA
5	2703-001778	L504	INDUCTOR-SMD	3.3uH,20%,3225	SA
5	2703-001778	L505	INDUCTOR-SMD	3.3uH,20%,3225	SA
5	2703-001778	L506	INDUCTOR-SMD	3.3uH,20%,3225	SA
5	2703-001778	L507	INDUCTOR-SMD	3.3uH,20%,3225	SA
5	2801-003667	X300	CRYSTAL-SMD	14.31818MHz,30ppm,28-AAN,16,50ohm,TP	SA
5	2801-004004	X700	CRYSTAL-SMD	20.25MHz,20ppm,28-AAN,13pF,25ohm,TP	SA
5	3301-001145	L704	BEAD-SMD	60ohm,4516,6000mA,TP,70ohm/45MHz,82ohm/760MHz,0.01ohm	SNA
5	3301-001288	L705	BEAD-SMD	30ohm,1608,400mA,TP,,,0.3ohm	SNA
5	3704-000249	IC202_SOCK	SOCKET-IC	32P,PLCC,SN,1.27mm	SA
5	3711-002049	CN201	CONNECTOR-HEADER	BOX,6P,1R,1.25mm,SMD-A,SN,WHT	SA
5	3711-005292	CN203	CONNECTOR-HEADER	BOX,3P,1R,2MM,SMD-A,SN,WHT	SA
5	3711-005470	CN301	CONNECTOR-HEADER	BOX,30P,1R,1.25mm,SMD-A,Sn+Pb,IVR	SA
5	BN09-00008A	IC700	IC MICOM	VCTXYI-D2,MH17WS,144,8.7,20.25,20,8,MQFP,TR,8,0 to +65	SNA
5	BN27-00002A	L601	COIL-CHOKE(SMD)	47uH,47uH,20%,12*12*8mm,22.5Ts,SMD,-,-,0.75ohm,-,-,-,TP	SA
5	BN27-00002A	L602	COIL-CHOKE(SMD)	47uH,47uH,20%,12*12*8mm,22.5Ts,SMD,-,-,0.75ohm,-,-,-,TP	SA
5	BN27-00017A	L700	COIL CHOKE-SMD	PO5845-330,LT17N2,33uH,10%,0.3ohm,1A,DR5845,35.5Ts,6*5.2*4.5,1.5mm,TP	SA
5	BN41-00548A	MP1.0	PCB MAIN	MZ19FS,FR4,1.0,1.6,230*118*1.6,MZ19FS	SNA
4	BN97-00489A	MICOM	ASSY MICOM	MZ19FS	SNA
5	1102-001129	IC202	IC-EPROM	M27W401,512KX8BIT,PLCC,32P,11.35X13.89MM,80NS,3.3V,10%,PLASTIC,-40TO+85C,-,CMOS,	SA
2	BN91-00837A	-	ASSY SHIELD	MZ19FS	SNA
3	6003-000115	IP/PCB+SH/PAN	SCREW-TAPTITE	BH,+,B,M3,L6,ZPC(BLK),SWRCH18A,-	SNA
3	6003-000115	M/PCB+SH/PAN	SCREW-TAPTITE	BH,+,B,M3,L6,ZPC(BLK),SWRCH18A,-	SNA
3	6003-000115	SH/PAN+SH/PCB	SCREW-TAPTITE	BH,+,B,M3,L6,ZPC(BLK),SWRCH18A,-	SNA
3	6003-000275	C/F+SH/PCB	SCREW-TAPTITE	BH,+,B,M3,L10,BLK ,SWCH1018AK	SNA
3	BN96-01814A	CIS	ASSY SHIELD P-PCB	MZ19FS,SECC T0.8	SNA

7-2 Others

Level	Code No.	Loc. No.	Description	Specification	Remarks
2	BN90-00699A	-	ASSY COVER FRONT	MZ19FS	SNA
3	6003-001003	C/F+C/R	SCREW-TAPTITE	BH,+,B,M4,L12,ZPC(BLK),SWRCH18	SNA
3	BN96-01809A	C/F	ASSY COVER P-FRONT	MZ19FS,ABS HB,GR70	SNA
2	BN90-00700A	-	ASSY COVER REAR	MZ19FS	SNA
3	BN96-01813A	C/R	ASSY COVER P-REAR	MZ19FS,ABS HB,GR91	SNA
2	BN91-00407T	-	ASSY LCD	SV19PO	SNA
3	BN07-00191B	LCD	LCD-PANEL	LTM190EX-L01,GY,6BIT,396*324*17,16.2M,4:3,0.294*0.294,0~50,5V,TN ZPD	SA
2	BN91-00836A	-	ASSY CHASSIS	MZ19FS	SA
3	BN44-00116A	CIS	IP BOARD	IP-48135T,MH17WS,3.2mA,8.6mA,48KHZ,4,90V/264VAC,+13V/+5.1V,0 to +50, -20 to~+70,	SA
3	BN63-01694A	CIS	SHIELD-PANEL	MH19FS,SECC,T0.8	SNA
2	BN92-01044R	-	ASSY LABEL	MH17WS	SNA
3	BN68-00614A	LABEL	LABEL RATING-00	ALL,SS,PE,T0.05,90*45,BLK,POLYESTER,NO SILK	SNA
3	BN68-00730C	LABEL	LABEL RATING-00	MH17**,SS,PE,T0.05,90,45,BLK,POLYESTER,EDC(TCO99)	SNA
2	BN92-01298A	-	ASSY BOX	MZ19FS	SNA
3	BH68-00329C	BOX	LABEL BAR CODE-02	ALL,TCO99,DOMESTIC,MOJO 90G,WHT	SNA
3	BH75-10529C	BOX	UNIT-HANDLE/PACKING	S/M170MP,PE-LD,PE-HD,-,WHITE,-	SNA
4	BN72-60001A	CIS	LEVER-TOP	LSD210TL,PE-LD,WHITE,TFT_LCD	SNA
4	BN72-60002C	CIS	LEVER-BOTTOM	S/M170MP,PE-HD,BLUE	SNA
3	BN69-00969B	BOX	BOX-00,SET	MZ19FS,CB-SW4,A-1,W515*D564*H138,YEL,GUJU	SNA
2	BN92-01300A	-	ASSY ACCESSORY	MZ19FS	SNA
3	BN59-00434A	ACCESSORY	REMOCON	Manet_Multi,TM79,40,SV-012P,EX,NT/PAL	SA
3	BN96-01784V	UNIT/ACCESSORY	ASSY ACCESSORY	MZ19FS*/EDC	SNA
4	6902-000110	ACCESSORY	BAG PE	LDPE,T0.05,L356,W240,TRP,28,2,PE MARK	SNA
4	BH68-70438A	ACCESSORY	CARD-BLOC WARRANTY-09	TFT LCD,BASIC,EU,MOJO,100G,W21	SNA
4	BH68-70448A	ACCESSORY	CARD-01	TFT LCD,SRC,RUSSIA,S/W,120,W210*L120,INSTALL CARD	SNA
4	BN96-00832N	ACCESSORY	ASSY MANUAL P-IB+QSG	MZ19FS 910MP,SyncMaster,W/W,30Lang,BN59-390N,BH68-376L	SNA
5	BH68-00376L	QUICK SETUP	MANUAL-04	LCDQUICK SETUP GUIDE,SYNCMASTER,E/F/S/G/P/I..13LANGS,W/W,MOJO100G,298,420	SNA
5	BN59-00390N	IB	S/W DRIVER-00,IB	MZ19FS 910MP,WW,SyncMaster,30 Lang.	SNA
3	BN96-01852Z	UNIT/ACCESSORY	ASSY ACCESSORY	MZ19FS*,EDC	SNA
4	3705-001191	ACCESSORY	CONNECTOR-COAXIAL	PAL,ADAPTER(J/P),30mohm,-,-	SA
4	3903-000042	ACCESSORY	CBF-POWER CORD	DT,EU,FP3/YES,IEC320 C13/C14,250/250V,10-16/10A,BLK,1830MM,-,H05VV-F 3X0.75MM^2,	SA
4	4301-000121	ACCESSORY	BATTERY-MN	1.5V,-,AAA,10.5x44.5m,HOLDER	SNA
4	6902-000110	ACCESSORY	BAG PE	LDPE,T0.05,L356,W240,TRP,28,2,PE MARK	SNA
4	BN39-00061B	ACCESSORY	CBF SIGNAL-STEREO	MH15NS,1P,UL2851#26,2000mm,PLUG(BLK/GRN),BLACK,STEREO,SJ03-01-418	SA
4	BN39-00244B	ACCESSORY	CBF SIGNAL	MO15PS,15P/15P,20276-N,1830MM,UL20276,BLACK,D-SUB/MALE,DET. TYPE	SA
2	BN92-01301A	-	ASSY P/MATERIAL	MZ19FS	SNA
3	6902-000061	P/M	BAG AIR	LDPE,T0.2,L1000,W500,TRP,,,	SNA
3	6902-000379	P/M	BAG AIR	HDPE,T0.2,L1800,W1000,TRP,,,PAPER	SNA
3	6902-000522	P/M	BAG PE	HDPE/NITRON/HDPE,T0.015/T0.5/T0.015,W700,L800,TRP,28 LANGUAGE,2-	SNA
3	6902-000604	P/M	BAG WRAPPING	LDPE,T0.02,W500,L10000,TRP,-,-	SNA
3	6902-000609	P/M	BAG ROLL	LDPE,T0.05,W2400,L1000,TRP,-,-	SNA
3	BH68-40364A	P/M	LABEL-SUMMARY	G52,G72,ART,100G,WHT,BLK,W142*	SNA
3	BH69-00457B	P/M	PACKING-PAD BOTTOM	GH15,FOAM,T3.0,930,1000	SNA
3	BH69-40321A	P/M	PACKING-PAD	SW-4,W2155*L140,-,DEC,-,-,-,-,	SNA
3	BH69-40358A	P/M	PACKING-PAD TOP(SKD)	CB-SW4,W815*L1154,200G,CQM5307	SNA
3	BN68-00129A	P/M	LABEL SHIPPING-00	-,LABEL SHIPPING,ART-PAPER,100G,-,WHT,BLACK,-,-,-	SNA
3	BN69-00617U	P/M	PALLET-WOODEN	MZ19FS,WOODEN,1155,1060,120,2 WAY TYPE	SNA
3	BN69-00935A	P/M	CUSHION-SET	MH19FS,EPS,M50	SNA

Memo

8 Block Diagram

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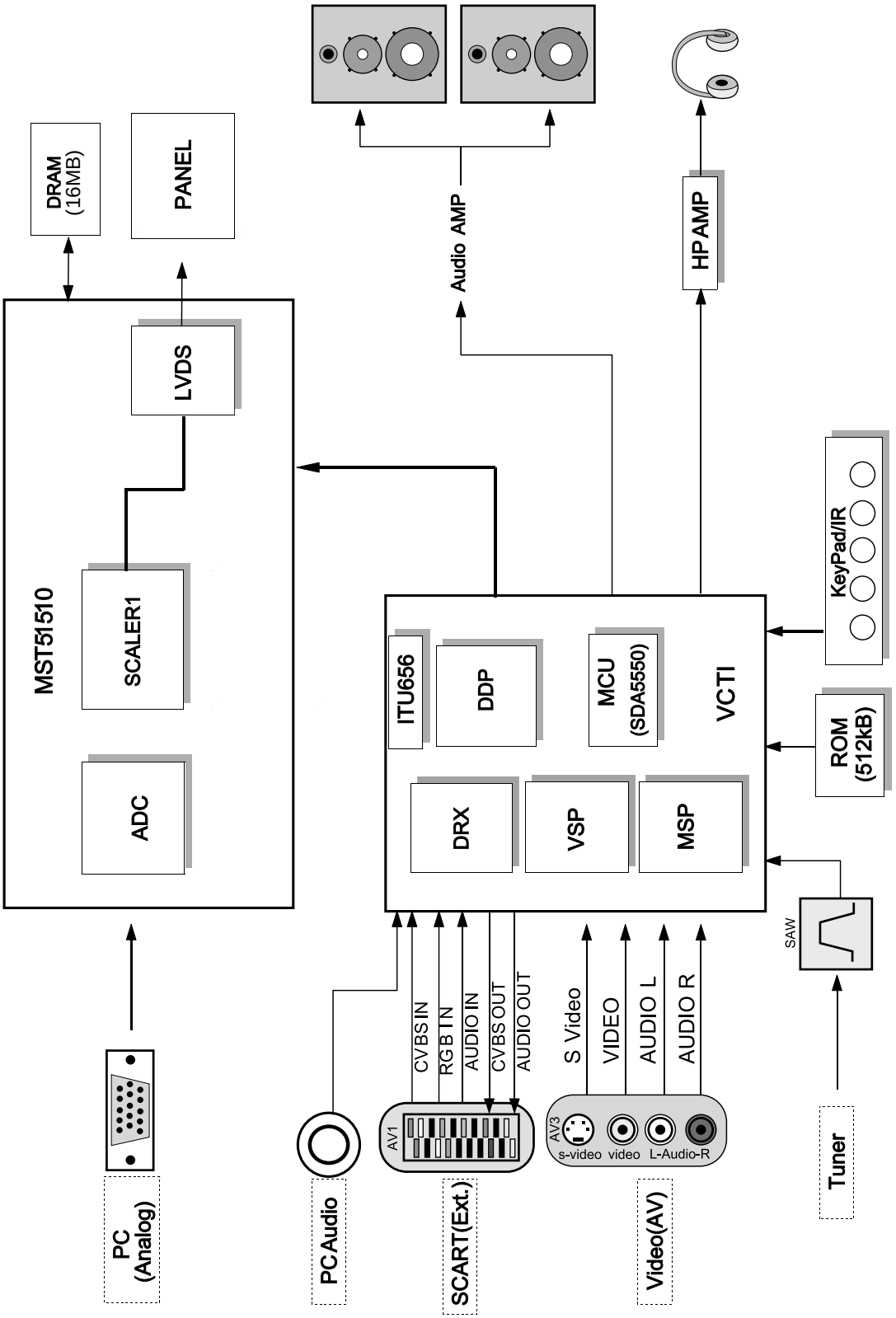


Memo

9 Wiring Diagram

CN600
TO POWER

1	2	3	4	5	6	7	8	9
+ 13V_IN	+ 13V_IN	GND	GND	GND	+ 5V_IN	+ 5V_IN	BL_BRT	BL_EN

CN301
TO PANEL

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
NC	GND	RxE3+	RxE3-	GND	RxEC+	RxEC-	GND	RxE2+	RxE2-	GND	RxE1+	RxE1-	GND	RxE0+	RxE0-	RxO3+	RxO3-	RxOC+	RxOC-	GND	RxO2+	RxO2-	RxO1+	RxO1-	RxO0+	RxO0-	5V	5V	5V

CN201

1	2	3	4	5	6
+ 3.3V_MAIN	VCT_RXD	VCT_TXD	GND	VCT_RESETQ	GND

CN203

GND	1
VCT_SCL	2
VCT_SDA	3

CN700
TV ANT.

TUNER	TAGC	1
	NC	2
	AS	3
	VCT_SCL	4
	VCT_SDA	5
	NC	6
	+ 5V_TUNER	7
	NC	8
	+ 33V_T	9
	IF_2	10
	IF_1	11

CN101
TO PC(Analog)

1	RED_IN
2	GREEN_IN
3	BLUE_IN
4	NC
5	GND
6	R_GND
7	G_GND
8	B_GND
9	+ 5V_IN
10	CHK_DSUB
11	NC
12	+ 5V_DDC
13	PC_HSYNC_IN
14	PC_VSYNC_IN
15	+ 5V_DDC

CN507
PC Sound
INPUT

1	GND
2	PC_ARIN
3	GND
4	PC_ALIN
5	GND

CN506
EXIT(RGB)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
SCART_AROUT	SCART_ARIN	SCART_ADOUT	GND	GND	SCART_ALIN	SCART_VBIN	SCART_AVSW	GND	NC	SCART_VGIN	NC	GND	GND	SCART_VRIN	SCART_FBLNK	GND	GND	SCART_VOUT	SCART_VIN	GND

CN508
AV INPUT

1	2	3	4	5	6	7	8	9
GND	VCR_ALIN	VCR_ARIN	GND	VCR_ARIN	VCR_ALIN	GND	CHK_VIDEO	VCR_IN

CN713
S-VIDEO

1	2	3	4	5	6	7
GND	GND	GND	SVHS_Y IN	SVHS_C IN	CHK_SVIDEO	CHK_SVIDEO

CN509
HEADPHONE

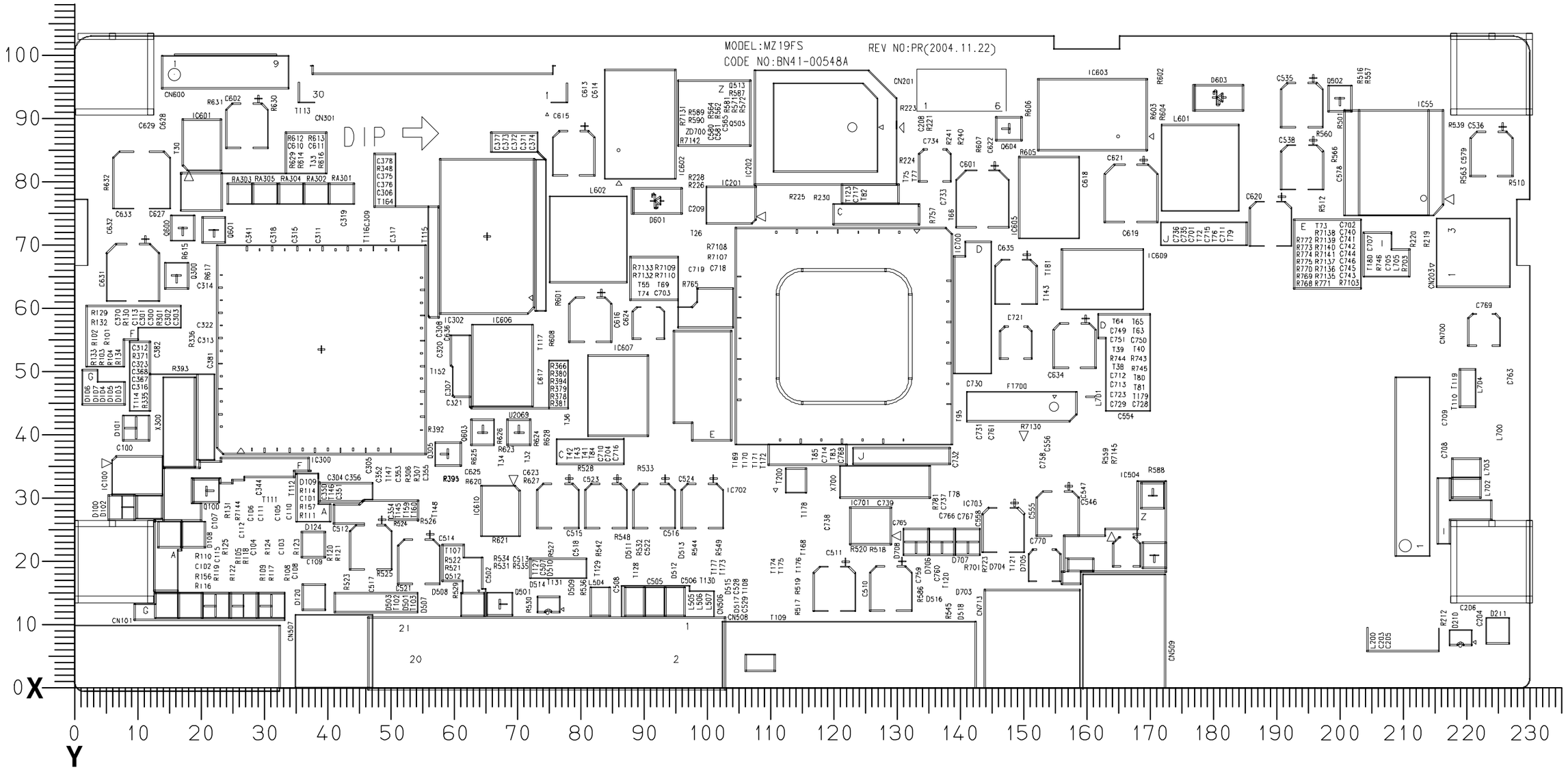
1	2	3	4	5	6	7	8	9	10
GND	HPDR	HPDL	OUT2_	SPK_L+	NC	OUT1	SPK_R+	NC	GND

CN202
TO Function CTL

1	2	3	4	5	6	7	8	9	10
SPK_R-	SPK_R+	SPK_L-	SPK_L+	GND	KEY_AD2	KEY_AD1	LEDGRN	IRRCVR	+ 3.3V_MAIN

Memo

10 PCB Layout



Loc. No.	Description	X	Y
DIODE			
D100	DIODE-SWITCHING	7.5	28.6
D101	DIODE-SWITCHING	9.7	41.1
D102	DIODE-ZENER	11.8	28.6
D103	DIODE-SWITCHING	31.1	13
D104	DIODE-SWITCHING	22.3	13
D105	DIODE-SWITCHING	26.7	13
D106	DIODE-ZENER	14.5	13.1
D107	DIODE-ZENER	18.3	13.1
D108	DIODE-ZENER	18.8	24.3
D109	DIODE-ZENER	15	24.3
D120	DIODE-ZENER	37.809	14.392
D124	DIODE-ZENER	37.73	22.675
D210	DIODE-ZENER	210.5	7.5
D211	DIODE-ZENER	219.6	8.5
D501	DIODE-TVS	46.17	13.494
D503	DIODE-TVS	41.97	13.494
D507	DIODE-TVS	56.5	13.1
D508	DIODE-TVS	58.6	13.1
D509	DIODE-TVS	78.5	13.1
D510	DIODE-TVS	79.8	19
D511	DIODE-TVS	87.4	19
D512	DIODE-TVS	93.4	18.6
D513	DIODE-TVS	96	19
D514	DIODE-ZENER	74.9	13.1
D515	DIODE-TVS	107.5	16.2
D516	DIODE-TVS	135.20414	12.19396
D517	DIODE-TVS	107.6	13
D518	DIODE-TVS	141.4	12.1
D601	DIODE-RECTIFIER	92.1	77
D603	DIODE-RECTIFIER	180.9	93.3
D703	DIODE-TVS	141.1	17.6
D704	DIODE-TVS	146.3	17.6
D705	DIODE-TVS	149.8	17.6
D706	DIODE-SWITCHING	137.1	23.1
D707	DIODE-SWITCHING	141.2	23.1
D708	DIODE-SWITCHING	133	23.1
ZD700	DIODE-ZENER	159.4	21
IC			
IC55	IC-AUDIO AMP	208.5	83
IC100	IC-EEPROM	9.9	33.6
IC201	IC-EEPROM	103.75	76.35
IC202_SOCK	SOCKET-IC	118.7	88.6
IC202	IC-EPROM	118.7	88.6
IC300	IC-LCD CONTROLLER	39	53.5
IC302	IC-DRAM	65.2	71.4
IC504	IC-AUDIO AMP	164.9	28.75
IC601	FET-SILICON	20.1	85.8
IC602	IC-DC/DC CONVERTER	89.4	89.6
IC603	IC-DC/DC CONVERTER	160.4	90.6
IC605	IC-POSI.FIXED REG.	154.014	77.494
IC606	IC-POSI.FIXED REG.	67.6	51
IC607	IC-POSI.FIXED REG.	85.9	46.2
IC609	IC-POSI.FIXED REG.	162.466	64.6

Loc. No.	Description	X	Y
IC610	FET-SILICON	67.3	28
IC700	IC MICOM	121.6	55.6
IC701	IC-VOL. DETECTOR	126.30907	25.62588
IC702	IC-CMOS LOGIC	107.8	26
IC703	IC-CMOS LOGIC	146.2	34.5
TRANSISTOR			
Q100	TR-SMALL SIGNAL	20.8	31.2
Q300	TR-SMALL SIGNAL	16.1	65.2
Q305	TR-SMALL SIGNAL	59	37
Q501	TR-SMALL SIGNAL	67.2	13.3
Q502	TR-SMALL SIGNAL	200	93.2
Q505	TR-SMALL SIGNAL	170.7	21
Q512	TR-SMALL SIGNAL	62.9	13.2
Q513	TR-SMALL SIGNAL	170.4	30.4
Q600	TR-SMALL SIGNAL	17.1	72.7
Q601	TR-SMALL SIGNAL	22	72.4
Q603	TR-SMALL SIGNAL	64.5	40.4
Q604	TR-SMALL SIGNAL	147.7	88.4

11 Schematic Diagrams

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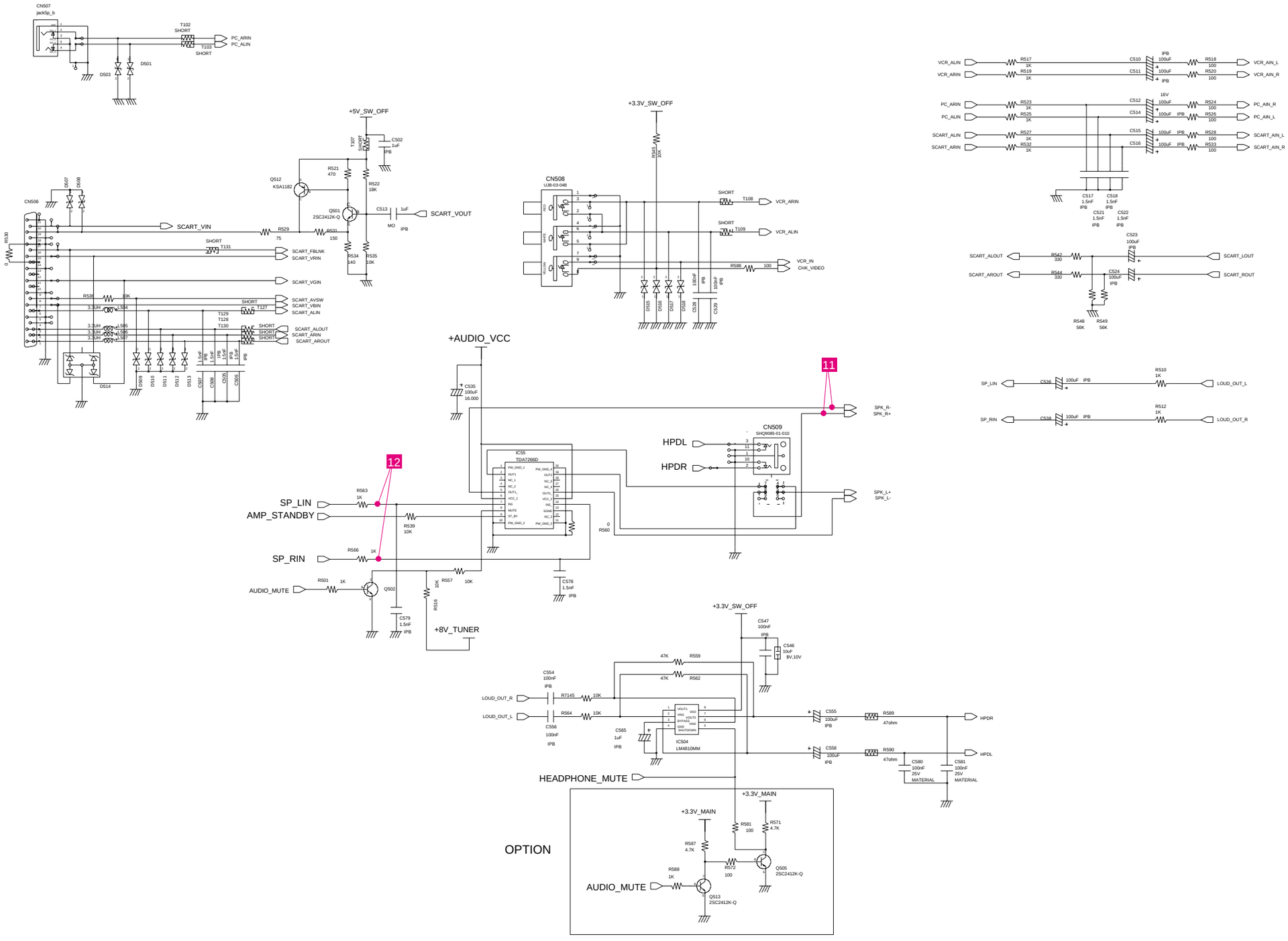
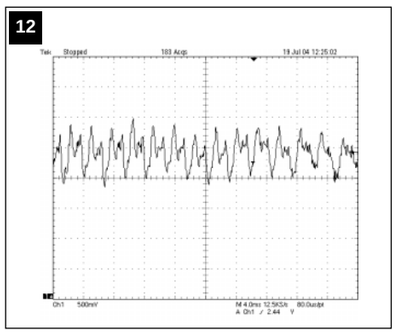
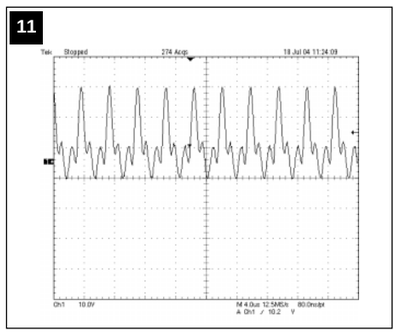
11-1 AUDIO Part Schematic Diagram



11 Schematic Diagrams





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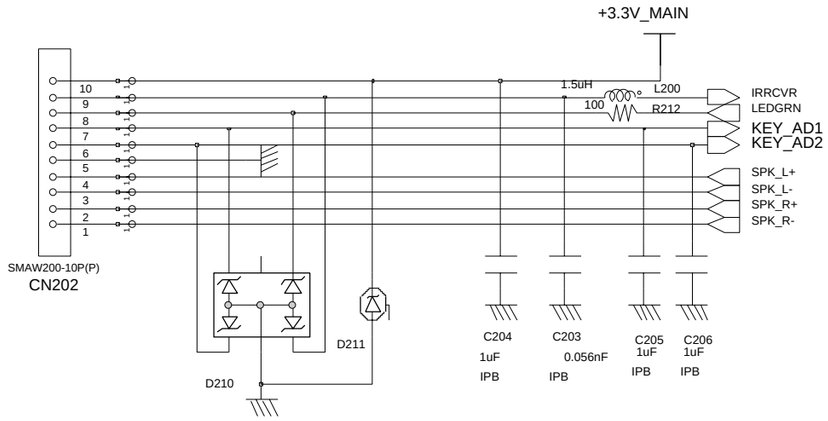
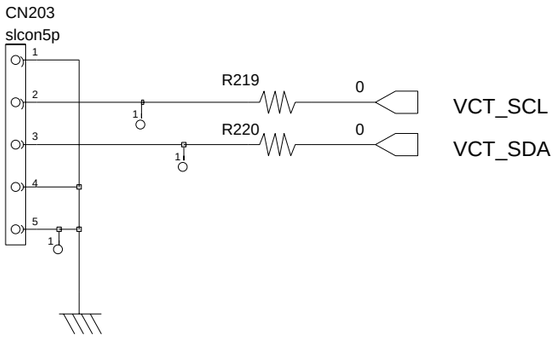
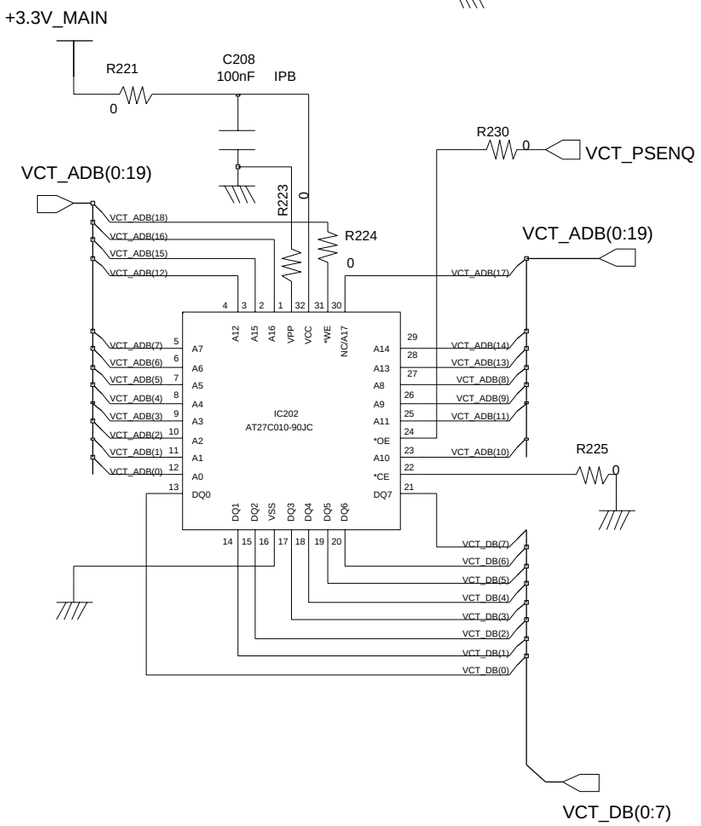
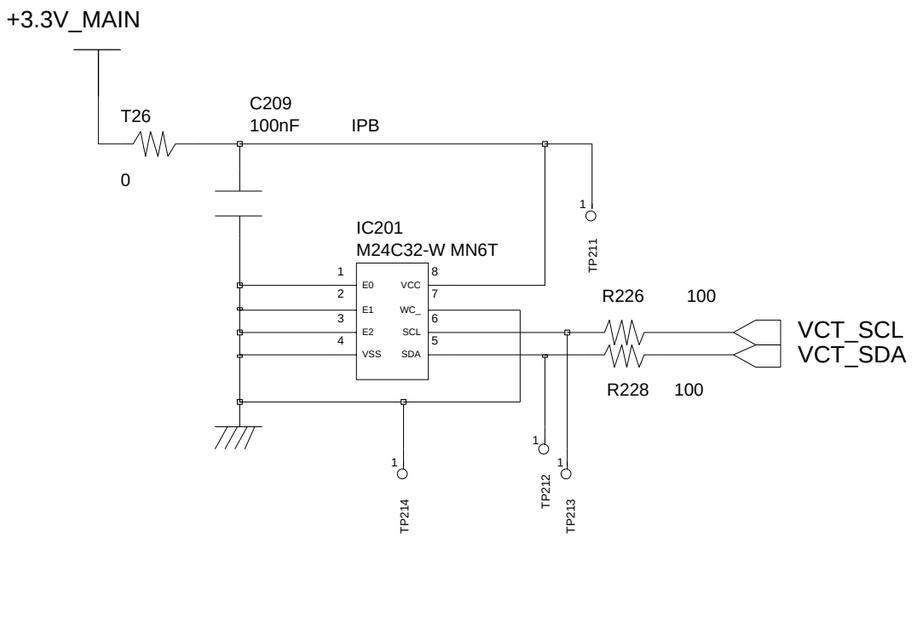
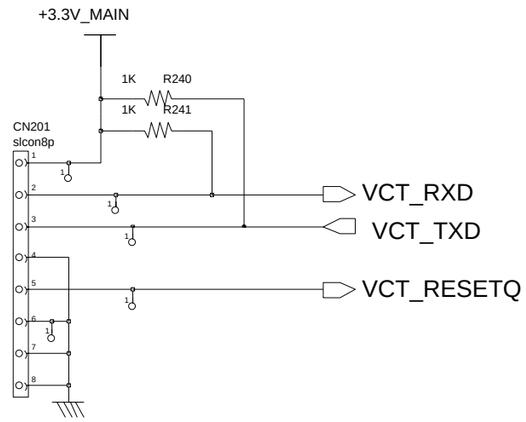
11-2 MICOM & EEPROM Part Schematic Diagram











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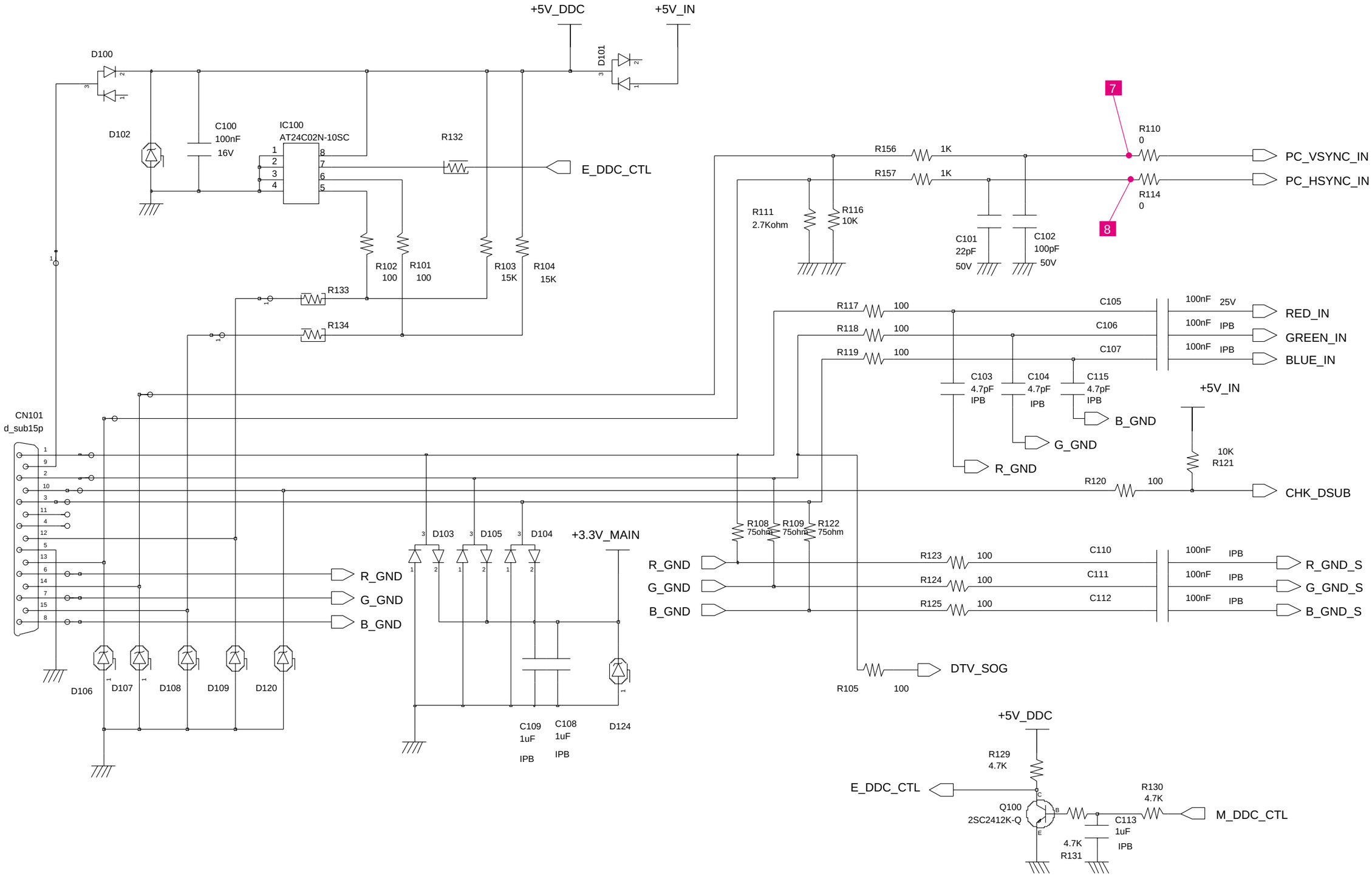
11-3 PC INPUT Part Schematic Diagram



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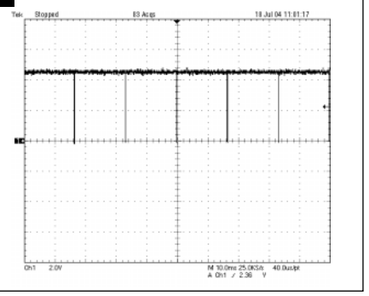
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83 Acqs
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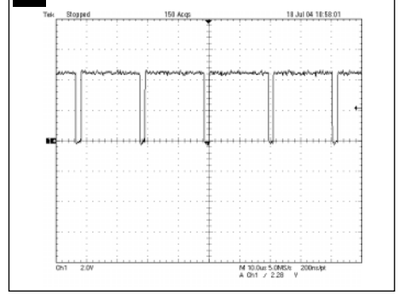
M 10.0ms 25.0KS/s 40.0us/pt
A Ch1 ∕ 2.36 V

8


Tek Stopped
158 Acqs
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Ch1 2.0V
M 10.0us 5.0MS/s 200ns/pt
A Ch1 ∕ 2.28 V

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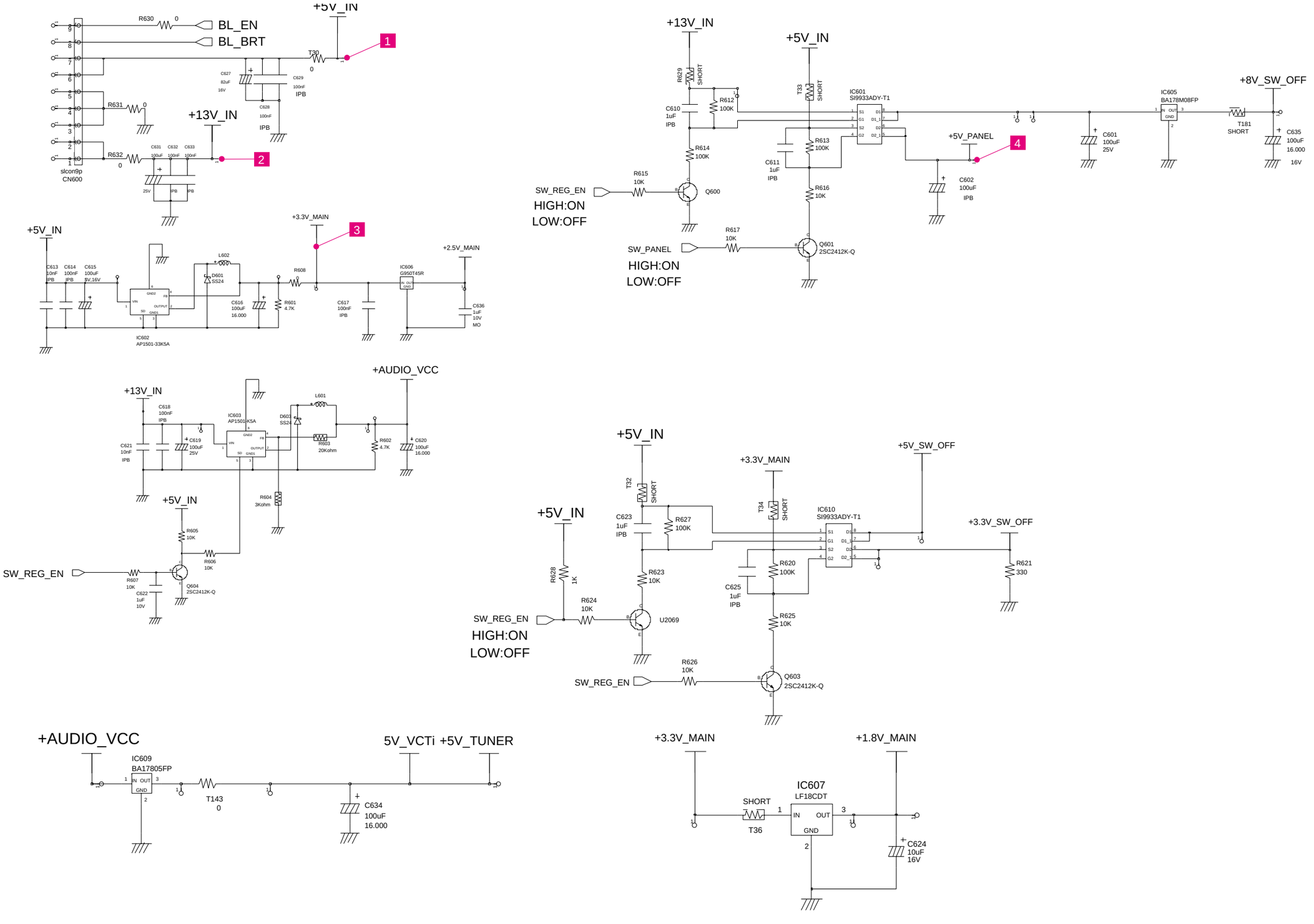
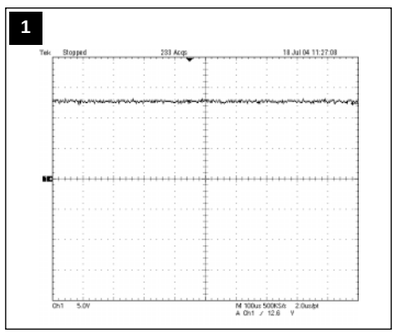
11-4 POWER Part Schematic Diagram

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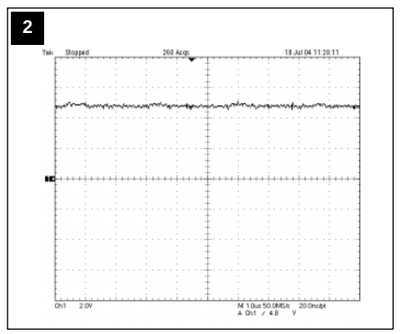
M 100us 500KS/s 2.0us/pt
A Ch1 ∕ 12.8 V


2
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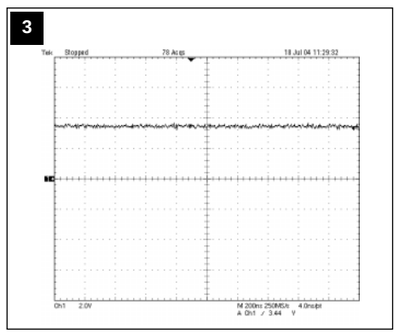
Ch1 2.0V
M 1.0us 50.0MS/s 20.0ns/pt
A Ch1 ∕ 4.8 V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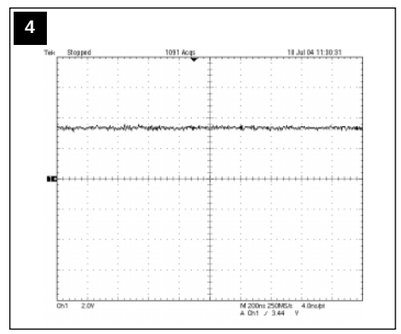
M 200ns 250MS/s 4.0ns/pt
A Ch1 ∕ 3.44 V


4
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A Ch1 ∕ 3.44 V

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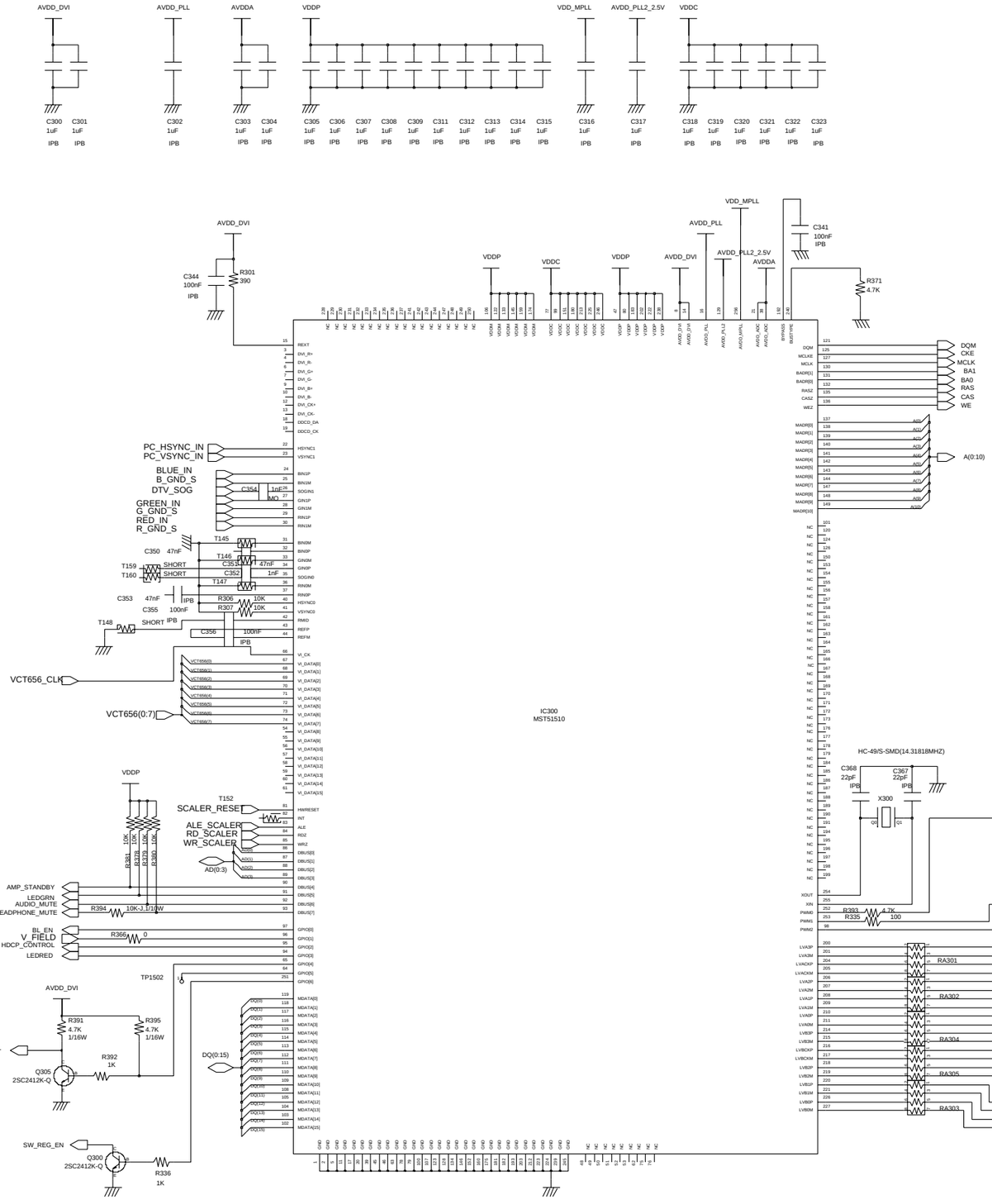
11-5 SCALER Part Schematic Diagram



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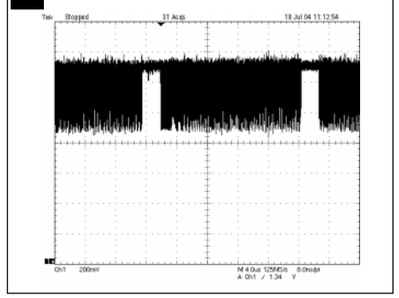
Tek Stopped
31 Acqs
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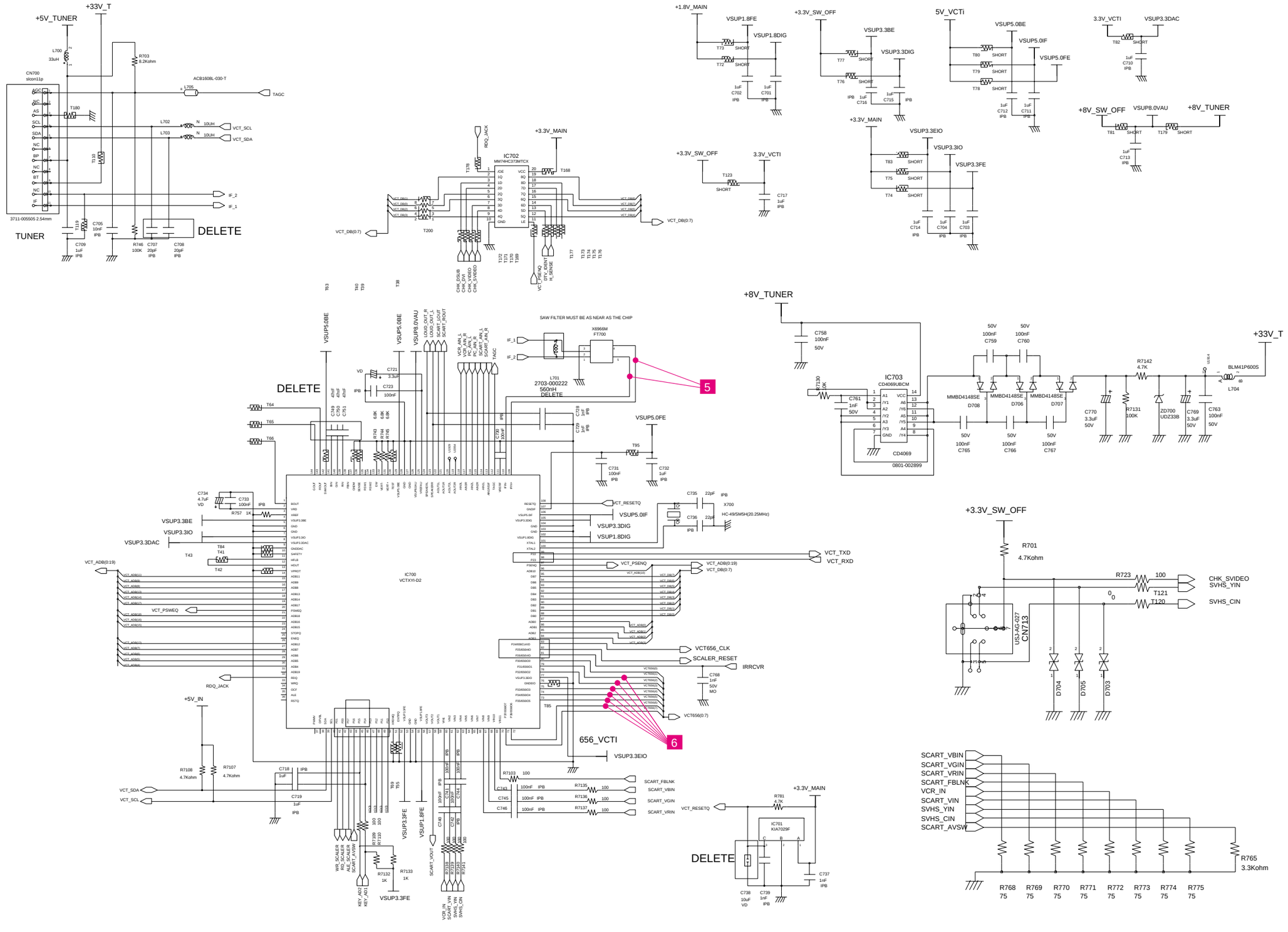
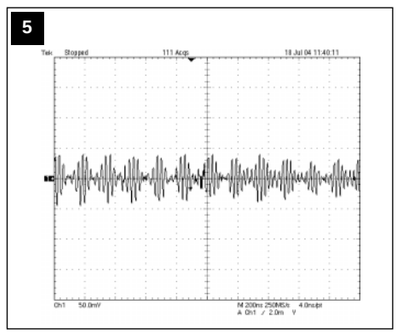
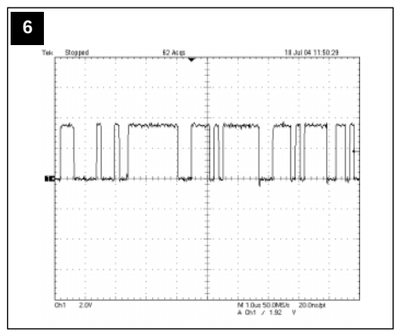
Ch1 200mV
M 4.0us 125MS/s 8.0ms/pt
A Ch1 ∕ 1.34 V

✺ This Document can not be used without Samsung's authorization.

11-6 Video input Part Schematic Diagram




5
Tek Stopped 111 Acqs 18 Jul 04 11:40:11
Ch1 50.0mV
M 200ns 250MS/s 4.0ns/pt
A Ch1 ∕ 2.0ns V


6
Tek Stopped 62 Acqs 18 Jul 04 11:50:29
Ch1 2.0V
M 1.0us 50.0MS/s 20.0ns/pt
A Ch1 ∕ 1.92 V